

Fig. 1. CRETE.

## MINOAN ARCHITECTURE: A STUDY OF PRE-HELLENIC ART IN CRETE.

By ALEXANDER R. C. EATON.

Essay submitted under the motto "Daedalus," awarded a Certificate of Honourable Mention in the Competition for the R.I.B.A. Essay Medal 1914.

### I.—INTRODUCTORY.

"HISTORY is poetry, could we tell it aright," said Carlyle, and of no history is this truer than of that of Crete. It is poetical alike in its picturesque setting, its rise, course, and final overthrow; the persistence of its fragmentary records in the literature of Greece, discredited and even utterly disbelieved for hundreds of years by men of learning; and its almost dramatic revelation to the modern world by the discovery of its remains.

Even to classical students twenty, nay, ten years ago, Crete was scarcely more than a land of legendary history and rationalised myths. It is true that the first reported aeronautical display was made by a youth of Cretan parentage, but in the absence of authenticated records of the time and circumstances of his flight, scholars were sceptical of his performance. And yet within less than ten short years we are faced by a revelation hardly more credible than this story; we are asked by archaeologists to carry ourselves back from A.D. 1910 to 1910 B.C. and witness a highly artistic people with palaces and treasures and letters, of whose existence we had not dreamed.\*

It is the history of this rich and highly developed civilisation of which it has been endeavoured to treat in this essay; more particularly on its architectural side. A wide interpretation has, however, been put upon the term "architecture"; an interpretation wide enough to make it embrace not only architecture in the sense of building, but the allied arts of fresco painting, sculpture, pottery, etc., while the geography, history, religion, and social life have also been touched upon.

This breadth of outlook has been adopted deliberately for four reasons. First, because all decorative art, whether it be concerned with the painting of frescoes or the carving of bas-reliefs, the shaping and decoration of vases or plaques, the design of furniture or hangings, falls within the architect's legitimate sphere. Its effect upon his building either for good or ill may be most decided. It may enhance and carry on the effects produced by the structure itself; or it may mar or even destroy altogether the unity of the design.

Secondly, because of the debt we owe to these allied arts for our knowledge of important architectural facts. Especially in dealing with the architecture of very early civilisations, it is frequently the case that the architectural remains throw no light on some very important points, as, for example, the style of elevation; and these points can often be solved, in part at least, by reference to existing pottery or frescoes, as the elevation of Minoan houses, on enamelled plaques found in the Palace at Knossos, which are dealt with elsewhere in this essay.

\* Hawes' *Crete, the Forerunner of Greece*: Introduction.

Thirdly, because of the influence all these allied subjects have on architecture. Under present-day conditions it is perhaps a little difficult to see how the engraving of a gem, the carving or moulding of a vase or the painting of a fresco can have much influence on the oldest and the grandest of the arts; but when one has divested oneself of the present as much as possible and looked at the question from the point of view of the past, the subject is seen to have a different aspect. The specialisation which is so prominent on all sides to-day was unknown in the past, when one man often combined in himself the most diverse accomplishments, so that the man who led a successful campaign to-day might to-morrow be writing histories or reforming the calendar, and the architect might be also painter, engineer, poet and philosopher. If then the architect of the palace at Phaestos or the Villa at Haghia Triadha may have been actively engaged in the allied arts, the study of them is almost sure to throw interesting cross-lights on the architectural work of the period, for a man's training in the practical technique of art must inevitably show itself in his designs.

As a final reason, and perhaps the most important of all. It is impossible to form a just estimate of past ages if the view is so narrowed as to take in only one aspect of that past. The relationship of event to event, the working of cause and effect, are not clearly comprehended or properly understood, and there must be a resulting loss in the grasp of the subject under study. Even viewing a period as comprehensively and sympathetically as we can, we have it on the authority of a great historian\* that "to be entirely just in our estimates of other ages is not difficult, it is impossible," but it is certain that the more comprehensive our view, the more just will be our final estimate of the period under study. The constant endeavour then of the conscientious student of an earlier age, from whatever point of view he approaches it, must always be to comprehend it as a whole, that he may see the different parts in their relative positions and correct perspective, though selecting always, of course, a point of view from which the particular objects in whose examination he is engaged, shall appear in the foreground of the picture.

The author, before proceeding to the detailed consideration of his subject, would take this opportunity of expressing his indebtedness to Sir Arthur Evans, D.Litt., LL.D., F.R.S., F.S.A., etc., to whom all students of Cretan antiquities owe so much, for his kindness in replying to questions addressed to him; indeed, both for text and illustrations the author is indebted to him, directly or indirectly, on almost every page. Also to Professor W. G. de Burgh, M.A.; G. Macmillan, Esq., D.Litt., Chairman of the British School at Athens; J. ff. Baker-Penoyre, Esq., Secretary of the Hellenic Society, and to the Librarian of the Institute and his staff.

## II.—THE WORK OF EXCAVATION IN THE AEGEAN AREA.

### (a) CAUSES LEADING TO EXCAVATION.

Greece, at its first appearance in history, is a highly civilised country with laws and institutions, social and political life, developed literature and art. Of its past little or nothing was until recently known. Few even dared to hazard a guess as to origins or progress prior to the historic period. Before about 700 B.C. all was more or less uncertain, fading gradually from the full light of history through the twilight of semi-historical tradition into the darkness of pure myth and legend. The tomb of Agamemnon and a few other remains of uncertain date, were known, it is true, but beyond a vague assignment to the Pelasgi, little in the way of theories were hazarded in regard to these. They were regarded in somewhat the same way as the Egyptian hieroglyphics before the discovery of the Rosetta stone, as past explanation. The stories of the siege of Troy, of Helen and Hector, Priam and Paris, Achilles, Agamemnon and Atreus, of the wanderings of Ulysses, and the countless other stories which professed to tell the early history of the Hellenic peoples, were regarded as having practically no real basis of fact. They were stories with probably some slight admixture of truth, but still merely stories.

\* Froude, *Short Studies*, vol. i.

believed in perhaps by the too credulous Greeks, but not capable of deceiving modern intelligence. For the modern "it was impossible to decide how much in the ancient epos was truth and how much poetic fiction."\* and being in doubt, he chose to believe nothing. So, too, the stories connected with Crete, Minos and his terrible Minotaur, which had its residence in the labyrinth at Minos' capital, the tribute of seven youths and seven maidens which Athens, under the domination of Minos, was compelled to send annually† to the island conqueror for the prey of the monster; Theseus going voluntarily to Crete, winning the favour of Ariadne, the daughter of Minos, meeting and slaying the Minotaur and carrying Ariadne off with him; the mechanical skill of Daedalus in his invention of sails, the wedge, axe and level, and the construction of the famous Labyrinth; and countless other stories were brushed on one side and labelled as of no historical importance, by an age which found it hard to believe in anything at all which could not actually be seen and handled.

In addition to all this persistent tradition there was the fact that the earliest Greek art known was of a highly developed type and must therefore have gone through a long process of development before reaching such a state; for progress in national art and culture, especially in the early stages, is always an exceedingly slow process.‡ A long previous development may, under special circumstances and granted conditions in every way favourable, be followed by a quick flowering and fruition, but never in the whole history of art have the early stages been other than slow and long continued. There was necessary, then, in order to explain undoubted facts in Greek history, a prehistoric period of great length and increasing culture, which must have left its traces somewhere, if only they could be found.

It is no cause for wonder then, that these two broad facts, the persistence of legend and the undoubted existence of a long prehistoric period, should cause some, of greater thinking powers than common, to turn their minds to the subject of pre-Hellenic culture, though even the most sanguine never imagined the variety and extent of the finds that were awaiting them. Within the space of a few decades was to be found material which would not only allow the broad outlines of their history to be settled, but the details of their art, their religion, their sports and their social life to be known, and would enable such a reconstruction of the past that an inspired speaker of these early times might with perfect truth, though in another sense, have used the words which Shakespeare has put into the mouth of Cassius:

How many ages hence  
Shall this our lofty scene be acted o'er  
In states unborn and accents yet unknown.§

#### (b) EXO-CRETAN EXCAVATION.

It was in 1829 in the parsonage house of Ankershazen, a small village of Mecklenburgh-Schwerin, that there took place an event of little seeming moment, but which was ultimately to prove of far-reaching importance to all who are in any way interested in architecture, history or racial development. The event was the gift to Heinrich Schliemann, then a boy of seven, of a child's history of the world containing a picture of Troy in flames. This picture awoke a passionate desire to see the scenes of these Trojan wars, which grew as time went on, and no amount of positive assertion could convince him that nothing remained of the great Troy of the Homeric poems. Everything combined to foster his love for mythology and the romantic. His father, a keen classical student, often told him tales from the *Iliad* and *Odyssey*, which must have made a great impression on the mind of the imaginative boy. His surroundings, too, seem to have been most picturesque, and they were redeemed from the ordinary by the prehistoric mound in the village, round which, with other local spots, local tradition had woven many legends of robbers and maidens and men-at-arms whose ghosts were reported to walk, and whose treasure was buried close by. Family misfortunes compelled him to leave home at an early age, and after a short schooling young Heinrich became, at the age of fourteen, a grocer's boy in a little village

\* Schuchardt's *Schliemann's Excavations*, ch. i.

‡ Baldwin Brown. *The Fine Arts*, ch. i. and ii.

† Some versions of the story make it every ninth year.

§ *Julius Cæsar*, III. i.

|| Schuchardt, ch. i.

store, where he was employed for five and a half years, during which time he developed a passion for Greek through hearing a drunken man, who had known better days, reciting Homer.

The story of Schliemann's subsequent doings reads more like a novel than sober biography. Life as a ship's boy; shipwreck; his life as an office boy with his rigorous self-denial in order that he could pay for education; his rise in the commercial world; and, finally, his amassing a fortune; but through all his work always the same idea, that of ultimately excavating for the site of the Homeric Troy; these elements would surely furnish any novelist with abundant materials for more than one book.

In 1863 Schliemann wound up his business and was free to start on the work on which he had for so long set his heart. He travelled for some years, intending at the end of his travels to commence excavations. A law case and other matters however detained him, and it was not until 1871 that he commenced to dig.

The site chosen to commence operations was Hissarlik, which tradition had always associated with ancient Troy. He brushed on one side as of no account the fact that "every influential scholar and traveller . . . favoured the view that disregards the leading traits of the Homeric picture and bids us recognise the ancient capital of the Troad in a small mountain fastness near Bunabashi, situated at a considerable distance from the sea." \* He preferred to follow myth rather than modern and revolutionary ideas.

Some few finds of the Mycenaean period had been given to the world in the few years preceding this start at Hissarlik.† In 1866 workmen getting out pozzolana in the island of Therasia for the Suez Canal works, came across a few primitive structures. Two years later M. A. Biliotti found in the tombs at Ialysus in Rhodes, a number of very fine painted vases, which were afterwards called third and fourth Mycenaean, while the island of Santorin (Thera) yielded to the French School at Athens some pottery of Aegean date.

It was reserved for Schliemann to make the discoveries which were to add a new chapter to archaeological history. With a courage and resolution born of an absolute faith in the truth of his beliefs, Schliemann cut boldly through the upper strata of civilisation, Roman, Greek, &c., and in 1873 reached the second or Burnt City with its fortifications and wonderful treasure of gold and silver objects. This second city was mistaken by Schliemann for the Homeric Troy, a natural mistake when one remembers that it was the first prehistoric city which he discovered, as, the city having grown as years went on, the circuit of the later cities lay completely outside the area of his excavations.

From Troy he passed successively to Mycenae and Tiryns, revealing a rich culture at every place he touched. His discoveries formed a triumphant vindication of his faith in the old Homeric Legends. Schuchardt ‡ has put this very aptly in speaking of the controversy which raged around the question of Troy:—

The question is now decided for ever. On the Hill of Hissarlik Dr. Schliemann has uncovered the ancient palace of Troy, has laid bare its colossal fortifications and brought to light its treasures of gold and silver. Moreover, in the country round about, his unwearying exertions have proved the accuracy of many details which show a coincidence, astonishing even to the most credulous, between the picture unfolded in Homer and the one preserved to this day.

In 1886 Chevalier Tsountas laid bare the foundations of a palace at Tiryns,§ while to the same year belong the finding of Mycenaean sepulchres outside the Argolid, in Thessaly, Kampos, and, richest of all, at Vaphio in Laconia, from whence came the famous golden goblets which have been described as "the most precious of all the works of Mycenaean art that have yet been drawn from the earth." || Pottery of Aegean style had been found just previous to this at Sidon and in Philistia, while in the following years came news of finds of pottery in Egypt, both at Fayum and at Tel-el-Amarna, the latter yielding some two thousand pieces.¶

It was not only the mainlands of the Eastern Mediterranean that yielded evidences of this early

\* Schuchardt, ch. i.

† D. G. Hogarth, "Aegean Civilization," in *Encyclopædia Britannica* (1911 ed.).

‡ Schuchardt, ch. ii.

§ Hogarth, "Aegean Civilization."

|| Bury's *History of Greece*, ch. i.

¶ Petrie's *Methods and Aims in Archaeology*, ch. xii.

civilisation. The islands gave similar and hardly less satisfactory results. Antiparos, Amorgos, Ios, Siphnos and Syros, Melos and Cyprus were all tried during this period and yielded good results, while Sicily and, further west, Spain were both shown to have their prehistoric remains of Aegean art and culture. There remained to the historian and archaeologist a great task, that of marshalling and arranging this great mass of finds, correlating one with another, and finally producing some clear and connected account of the great pre-Greek civilisation that had evidently had its home in the Aegean.

### (c) EXCAVATIONS IN CRETE.

Before any decision could be arrived at with regard to the history of Aegean culture, there was one point awaiting solution—namely, where did this early civilisation centre? What country or city was its fountain head, the metropolis of its artistic and political achievements? The claim of any spot to be this centre had to be submitted to two tests. It had first of all to show traces of all periods of which remains had been discovered; and it had, secondly, to show a sufficiently large output of the pre-Hellenic art at its best.\* Practically every available place, save one, had been tried, and had failed to fulfil these two conditions. Either there was lack of evidence of continuous occupation, or the variety and amount of art work produced was not such as would give it any pre-eminence over similar sites in many other spots.

The place which was awaiting exploration was Crete, the largest of the islands of the Eastern Mediterranean and one which in many ways offered itself as the most eligible spot at which this civilisation could have taken its rise. There was a great mass of early legend pointing to Crete as the heart of a prehistoric culture; its position and natural conditions were favourable, and many isolated finds had been made here.†

Why then had Crete not been taken seriously in hand? A glance at the pages dealing with Cretan history will show. Ruled by an alien and a corrupt power, and inhabited by a race who passionately detested their over-lords, the island was the scene of constant unrest, and even bloodshed. Insurrection followed insurrection, as regularly as they do at the present time in some South American States, and the conditions arising from this state of affairs were naturally such as to render abortive any attempt to commence archaeological research. Archaeologists had to be content to wait.

It was in 1898 that Turkish rule—or misrule—practically came to an end in the island and Europe took over the management of things. The way was now cleared for serious work in the island, and the archaeologists were not slow to avail themselves of the more favourable conditions. In 1900 Dr. (now Sir John) Evans commenced work at Knossos, while Professor Halbherr excavated in Phaestos and Aghia Triadha, Miss Boyd (now Mrs. Hawes) at Gounia, Mr. Hogarth at Psychro and Zalero, Messrs. Bosanquet and Dawkins at Palaikastro, and Mr. Seager at Vasiliki, Psyra, and Mokhlos. No doubt could now be entertained, from the number and variety of the finds, that the original home and centre of pre-Hellenic art had been found, and though the claims of various places to be the parent and tutor of Minoan culture have from time to time been put forward, yet every fresh discovery seems to tend to establish more securely the claim of Crete to pre-eminence.

## III. THE SETTING.

### (a) GEOGRAPHICAL.

The civilisation of Crete (map, Fig. 1) may be said to be, to some extent at least, the gift of its geographical situation. In this situation it is, or perhaps it would be more correct to say was, singularly fortunate. Before Oceanic superseded Mediterranean civilisations, the great lake was the region round which centred all that counted in the affairs of the known world, and Crete was at the centre of the Eastern Mediterranean, and moreover within easy reach of the mainland, both European

\* Hawes' *Crete*: Introduction.

† Hawes' *Crete*: Introduction; Hogarth's "Aegean Civilization" and Evans' "Crete" in *Encyclopædia Britannica*.



and Asiatic, being only 110 miles from Asia Minor and 60 miles from Greece. In addition there were many small islands, forming as it were stepping-stones to the shore. The African coast was barely 200 miles away, while Crete could be reached from Egypt, at the time of the rise of the Ægean culture the most highly civilised country in the world, in under 400 miles, and had also the advantage of lying in the direct route from that country to Europe, so that any commerce Egypt might want to carry on with Europe could hardly help touching Crete—and that commerce was regularly carried on is proved by the finds. Even to-day Zakro is still the principal half-way house for sailing craft between the Ægean area and the north coast of Africa.\*

The island nature of their home would make the Cretans from their earliest days a nation of sailors, and this combined with their position would practically force them to become traders, and trade and civilisation almost invariably go hand in hand.† Their maritime life would afford an excellent training in some of those virtues which are most essential in building up a civilisation: courage and hardihood, quickness of hand and eye; the habit of constant observation—for the Eastern Mediterranean is not a sea where navigation can be played at: numberless small islands, hidden reefs and sudden and furious storms, combine to render seamanship in those waters, if not a dangerous calling, at least one allowing no slackness: while if only in providing motifs for design, the sea has had some direct influence on Minoan art.

Crete is the third largest island in the Mediterranean, having an area of some 3,330 square miles, a length of 160 and a breadth varying from  $7\frac{1}{2}$  to 35 miles. Its coast line on the north is much indented, forming several natural harbours, the finest being that of Suda. The south coast has no secure harbour, but there is anchorage in several bays during summer weather or at all times when there is a north wind.

The mountains fall into four principal groups, which are joined up by lesser connecting ridges. There are several very fertile plains: whilst a peculiar feature of the island and one which has contributed to the prosperity of its inhabitants is the existence of level upland basins, among the mountains, where pasturage can always be found in summer. The island abounds in deep and narrow chasms and large caves, the most famous, of course, being that of Diète.

The trees include the cypress, olive, orange and lemon, chestnut, and valonia oak. The lower hills and valleys are extremely fertile.

#### (b) CLIMATIC.

The climate of Crete may be said to be midway between that of Europe and Africa: less rigorous in winter than, for instance, that of Greece, but not so hot in summer as that of Africa. The total rainfall of the island is not excessive—though it was probably greater at the time which is being discussed owing to its being much better wooded then than now—but in the wet season the rain is of a tropical nature: sudden and violent storms and torrential rains being the normal order of things. This question of climate, as will be seen later, profoundly influenced Minoan planning.

#### (c) GEOLOGICAL.

The geological structure of the island is exceedingly complex, and no attempt will be made here to give a scientific description of it. There is a bed of metamorphic rocks nine to ten thousand feet thick, consisting of gypsum, dolomite, conglomerates, phyllites, and a basic series of eruptive rocks, gabbros, peridotites, and serpentines: also later beds of the Jurassic, Cretaceous, and Tertiary periods, yielding limestones, schists, &c. It will thus be seen that there was abundance and variety of stone available both for structural and decorative purposes, and in addition clay for the making of bricks, &c., was ready to hand. These materials, together with the timber obtainable from the trees previously mentioned and the metals obtainable from the earth, furnished practically every kind of

\* *British School at Athens: Annual*, VII. p. 123.

† Professor de Burgh, *Legacy of Greece and Rome*, ch. i.

building material that could be desired, and gave the people ample opportunity of showing their skill as designers and constructors in various materials. Geologically Crete was as fortunate as geographically, and favourable conditions in the hands of a suitable people produced, as might have been expected, great results.

#### IV. THE PEOPLE.

##### (a) ORIGINS.

From whence came the people who built up the great civilisation of Crete? This is a question to which it is very difficult to give a really satisfactory answer, and from the tangle of facts which are quoted in support of widely differing theories but a few can be stated here, and many points admitting of a good deal of argument will have to be summarily stated.

Anthropometry has done much to help in deciphering this question of origins, for the types of skull remain the same for thousands of years \* and thus form a reliable guide in tracing racial movements in the past.† The comparison of the cephalic index of some hundred skulls of the Minoan period has shown that the great majority, some 65 or 70 per cent., were dolichocephalic or long headed, the greater part of the rest being of a medium type. This difference of skull type, which exists, it is interesting to note, to this day in Crete, proves almost conclusively admixture of races. The long-headed race, which formed the bulk of the people, came without doubt originally from Africa. One of the strongest proofs of this is the persistence of the loin cloth throughout the whole of the Minoan era. Now this is distinctively the garment of the South, and was eminently suited to the southern climate, but if one accepts the conclusions of, among others, Schmidt,‡ that migration into the Ægean area came from the North, the fact has to be faced that the distinctive dress of the North is not the loin cloth but the shirt; § the former would be eminently unsuitable for the climate, and, accepting the "northern" theory, the people must for some unknown reason have dropped their own garment and adopted one they had probably never seen before. The squatting attitude so noticeable in some Minoan figures is also strikingly characteristic of the South. Again, the colonisation of Crete probably took place at a time just after the last ice age, when the northern portions of Europe were absolutely uninhabitable and so could hardly have colonised the South.

The diffusion of this primitive long-headed people was undoubtedly very wide, extending over practically the whole Mediterranean area. The evidences for this are very strong. We have a certain unity of language of a pre-Hellenic, non-Aryan, and non-Semitic type—according to Fick || a real affinity between Pelasgian Greece, Minoan Crete, and Carian Anatolia is highly probable. We have a unity of cranial form; and we have a unity of artistic motifs: even Egypt shows evidences of this common origin.¶

The origin of the brachycephalic element in the Cretan people is much more obscure and admits of no dogmatic statement. It is very probable—and this view is supported by the Eastern influences discernable—that these broad-headed people came originally from Asia Minor. The whole subject of origins is, however, still very much a matter of controversy, and one cannot be sure of much beyond the broadest facts.

##### (b) HISTORY.

Even perhaps more than their origin is the history of the Cretans a thing of uncertainty and conjecture. It begins in legend and myths and only gradually emerges into history proper, so that there is often difficulty in picking out what is pure legend from what is substantially true though told

\* Professors Myers and Collignon.

† This theory, it is only fair to state, has been seriously challenged (Petrie, *Journ. Anth. Inst.* XXXVI., also in *Migrations*); it has even been suggested (Professor Arthur Thomson in *Journ. Anth. Inst.*) that the cephalic index can be altered in a lifetime by change of food.

‡ *Zeitschr. für Ethnol.*, 1904.

§ See representation of northerners on Warrior Vase, etc., Furtwängler and Loeschke's *Mykenische Vasen*.

|| *Vorgriechische Ortsnamen*.

¶ *Journal of Hellenic Studies*, XXIII. 162.

under the form of myth. It must always be borne in mind that the greater number of these myths are not native to Crete, but were formulated in later ages and foisted on the island by the Achæans, after the fall of Cretan supremacy; that, for instance, Zeus was utterly unknown to the Minoans themselves. Zeus, it will be remembered, assumed the form of a bull the better to press his suit with Europa, and in this form carried her off to Crete, where he assumed again his normal form and declared his love. From their amours sprang Minos, who became king of Crete—

From nine years old ruled Minos, who great Zeus for a speech-friend won,\*

was just and moderate, gave laws to his people, and was after death made absolute judge in the infernal regions. He was succeeded by Minos his son, who extended the power of Crete over the neighbouring islands, and conquered Athens. Of him we have the stories of the Minotaur, Daedalus, &c. It seems probable, as we find it applied to several kings, that this name of Minos was a dynastic title rather than a personal name.

Little as we know of the early times we can at least be certain of several points. The traditions † of extensive domination and of the clearing the sea of pirates are undoubtedly true: the former is proved conclusively both by the large number of tribute tallies which have been discovered and by the survival of the place-name Minoa ‡ over the whole Ægean area: it being found in, amongst other places, Siphnos, Palestine, Arabia, Sicily, and Laconia.

The historic tradition which identifies with the Cretans the principal element of the Philistine confederation,§ and places the tomb of Minos himself in Western Sicily, thus receives remarkable confirmation.

The empire of Crete began, according to the belief of Dr. Mackenzie, as an Ægean league ¶ and gradually developed into an empire, much the same as Athens did later.

Minoan periods are three: Early, Middle, and Late, each being in turn subdivided into three parts.

The Early Minoan period may be said to take its rise about 2800 B.C., lasting until 2200; the Middle Minoan from then until 1700 B.C.; the Late until 1200 B.C., when the Iron Age takes the place of the early Bronze Age, and Cretan history is lost until the island emerges from obscurity in Hellenic times.

In the Middle Minoan period (2000 B.C.) Crete reached its first climax; Knossos and Phaestos came to the front as leaders; trade flourished and the arts were at their height.

The height of prosperity for the smaller towns of the island was reached in the first Late Minoan period, when peace and prosperity were the order of the day and art production was free and good. The second Late Minoan, or Palace, Period, was the so-called "Golden Age" of Crete. It witnessed the completion of the second palace at Phaestos and the remodelling of that at Knossos. At the end of the period the country towns fell, Knossos not falling until the succeeding period; during which period also took place the partial re-occupation of the various sites, followed between 1210 and 1200 B.C. by the final invasion and fall of Crete.

The great catastrophe was not the work of an Aryan people, as has been asserted; nor can we follow Sir Arthur Evans \*\* in attributing it merely to an internal revolution; the destruction was too widespread and universal for that; it was most probably the work of a kindred Aegean race,†† driven onward from their homes by the pressure of the oncoming Northmen. Directly the ruling dynasties were removed these newcomers seem to have settled down in a fraternal manner with the people, and for a short time there existed a period of re-occupation, which was finally ended by the coming of the Northerners. All over the Aegean the same thing was taking place; the Northerners were coming—

here in smaller bodies, there in larger; here peacefully assimilating the culture of the older people, there sacking and destroying; in some places driving those among whom they came to win new homes in their turn by conquest of their kinsmen overseas.‡‡

\* *Odyssey*, XIX. 178.

† Herodotus, III. 122; Thucydides, I. iv. and viii., etc.

‡ Burrows' *Discoveries in Crete*, ch. i., also Fick's *Vor-griechische Ortsnamen*.

§ Psalm lxxxiii. 7.

¶ Evans in *Encyclopædia Britannica*: "Crete."

¶ "Phylakopi."

\*\* *Times*, 31st Oct., 1905, and *B.S.A.* XI.

†† Mackenzie, *B.S.A.* XIII.

‡‡ Burrows' *Discoveries*, ch. ix.



The crash was not nearly so great in Crete as it had been at the time of the former catastrophe ; indeed it seems to have been rather a gradual dying out of art and culture, the imposition of Dorian customs and conditions—we find, for instance, varying types of burial custom in the same tomb \* and continental types of weapons and pottery side by side with the old island types.

The outstanding feature of these Dorian invasions was, of course, the bringing of iron, which had hitherto been unknown in Crete. The very interesting discovery of two swords at Tell Firaun in the Nile delta bearing the cartouche of Seti II. (XIX. dynasty) of precisely similar form to those brought into Crete by the invaders, which appear first in one of the famous Moulianá tombs just subsequent to L.M. III., has enabled the date of the invasions to be fixed with great accuracy.† Since the reign of Seti II. was during the last decade of the thirteenth century B.C., these invasions must be of that date also. It is interesting to know that this period is said to satisfy the conditions required by the Homeric armour.‡

The great defect in Cretan history, as in that of later Greece, was always want of unity and continual internal strife : now one city would obtain mastery, then another, until there came at last the final overthrow, and Crete disappeared into the " dark ages " from which was to spring the Greece of classical times.

### (c) RELIGION.

It has already been pointed out that the deities whose names have been more or less associated with Crete in later times were unknown to the Minoans themselves. Their religion was of a much more primitive type, and was one, moreover, that showed development during the course of Minoan activity. It was at first aniconic, later an image cult grew up side by side with the earlier form.

The central feature of the religion consisted in the habitation of natural features, rocks, mountain peaks, etc., or such objects as pillars of wood or stone or axes, by the divine spirit ; § and the essential rite or ceremony consisted in the bringing down of the celestial spirit into the fetish objects by proper incantations, &c. || The chief divinity was a great nature goddess, with whom was associated as half consort and half son an inferior male satellite. ¶ Her dominion extended even to the underworld. She is represented sometimes with doves, as goddess of the air, sometimes (in her clothed aspect) with snakes ; sometimes she has lions with her or holds the double axe.

There seems to be an interesting harking back to the more primitive efforts after the representation of this divinity in the very interesting finds \*\* at the House of the Fetish Shrine, Knossos, where were discovered a series of grotesque concretions of quasi-human appearance very similar to some discovered in Egypt ††—two of which probably represented this mother goddess and her son-satellite. The actions and influence of this goddess are admirably summed up in those lines of Browning ‡‡—

I shed in Hell o'er my pale people peace ;  
On Earth, I, caring for the creatures, guard  
Each pregnant yellow wolf and fox-bitch sleek,  
And every feathered mother's callow brood,  
And all that love green haunts and loneliness.

No temples, as far as is known, existed. Fergusson exhibited a quite prophetic instinct when, in speaking of the subject, he said, §§ " Like the Assyrians and other cognate Asiatic races, they were not temple builders. Places of worship they, of course, had, but slight and ephemeral as compared with those of their successors." The religion appears to have been a purely domestic one, no shrines except the cave sanctuaries having been discovered apart from buildings. Each house seems to have had a sort of oratory, ||| while several of these shrines appear in the Palace at Knossos. The Kings and

\* Dr. S. Xanthoudides, *Εφημερίς Ἀρχαιολογική*.

† T. E. Peet, *B.S.A.*, XVIII.

‡ *Liverpool Annals*, V.

§ Evans' *Minoan Tree and Pillar Cult*.

|| Evans in *Encyclopædia Britannica* : " Crete."

¶ Evans' *Minoan Tree and Pillar Cult*.

\*\* Evans in *B.S.A.* XI.

†† Petrie, *Abydos*, Pt. II.

‡‡ *Artemis Prologizes*.

§§ *Handbook of Architecture*, Vol. I., Bk. VI., ch. i.

||| Mackenzie in *B.S.A.*, IV.

Queens were priest Kings and Queens of whose daily life ritual probably formed a considerable part.\*

Amongst the more prominent cult objects were the horns of consecration and the double axes: the former, usually models—though sometimes the actual article—represented the horns of the bull, which animal was sacred and was often killed in sacrifice. The double axes have given rise to much controversy: some holding them to be cult objects,† others attaching no special meaning ‡ to them. The balance of evidence,‡ it must be admitted, is on the side of those who regard them iconastically.

(d)—SOCIAL AND COMMERCIAL LIFE.

First and foremost in the list of commercial occupations must stand the carrying trade of the island: the running of the great fleet of vessels which kept Crete supplied with goods required from overseas and took the products of island manufacture to Egypt or the neighbouring islands. The vessels were of low free-board, with masts and oars,§ and may be seen on seal impressions, frescoes, &c.

Agriculture and farming, of course, took a prominent position in island industries: mortars have been discovered on every town site for grinding the grain, while the actual peas and barley have been discovered in many buried jars. The only agricultural implements that have been found are bronze sickles. The vine and olive were cultivated on a large scale:¶ the latter was a staple article of diet and presses and large vats for washing and storing the oil have been discovered.

The manufacture of pottery and metal casting must have engaged a large number of men: crucibles and pots, slag, and numerous moulds have been discovered at several spots,\*\* while colonies of workmen for these two purposes were attached to the Palace at Knossos itself. One of the most interesting finds at Gournia was a complete carpenter's kit consisting of saws, chisels, awls, files, axes and nails, resembling very closely those in use to-day,†† while the mould used by the Gournian smith to cast the various tools required by his customers has been preserved to us.‡‡

Little seems to be known about slave labour in the island, but undoubtedly it existed, and slaves would be employed for the heavier and more mechanical forms of manual labour, as well as for jobs of an unpleasant nature, such as the removal of refuse.

Commercial activities naturally led to the development of a system of weights and measures and a system of writing. The standard of weight was based on the Babylonian shekel of 130 grains:§§ pieces of gypsum, ox-heads of bronze stuffed with lead, etc., served as weights.¶¶ In currency are found ingots of bronze and "dumps" and slices of gold and silver: These were sometimes marked with an H or T.¶¶

The Cretan script was of two types, pictorial and linear. This is not the place to enter at any length into the questions raised by these writings, interesting though they are.\*\*\* Beginning as pictograms on three sides of the steatite seals, they developed in the Middle Minoan period into hieroglyphics written on seal stones and tablets. By L.M.I., a linear form of writing, Sir Arthur Evans' Class A, ††† has taken the place of hieroglyphics, while another linear form—Class B—appears a little later. These forms of writing lingered on until the centuries immediately preceding the Christian era.‡‡‡

Of the social life of the people, much, of course, can be assumed with a fair amount of accuracy from the remains, but we are fortunate in not having to rely entirely on our imaginations to form pictures of the life of the times, for we have actual pictures remaining to us of scenes in the life of the people, as, for instance, the Miniature Fresco showing a grand court levée with women dancing.

We may well believe that the relation of king and people was very much that of the head and

\* Mackenzie in *B.S.A.*, IV.

† Evans's *Tree and Pillar Cult*.

‡ Hawes, *Crete*, ch. xi.

§ Evans in *Encyclopædia Britannica*: "Crete."

¶ Evans in *B.S.A.*, IX.; Dussaud in *Revue de l'Anthropologie*, 1906.

¶ Evans in *Encyclopædia Britannica*: "Crete"; R. C. Bosanquet in *B.S.A.*, VIII.

\*\* Hawes, *Crete*, ch. iii.

†† Mrs. Hawes in *Gournia, Vasiliki, and other Prehistoric Sites in the Isthmus of Hierapetra*.

‡‡ *Ibid.*

§§ Ridgeway in *Journal of Hellenic Studies*, X.

¶¶ Evans in *Corolla Numismatica*.

¶¶ *Ibid.*

\*\*\* Mrs. Williams, *Gournia*.

††† *Cretan Pictograms and Pre-Phœnician Script*.

‡‡‡ Hogarth in *Encyclopædia Britannica*: "Ægean Culture."

members of a clan, the king hearing disputes and judging between his people.\* There would be a freedom of approach to majesty which is quite unknown at the present time. There seems to have been a highly developed legal organisation, which shows great similarity with the code of Khammurabi and may have been influenced by it.†

Amongst the sports of the people bull fights were perhaps the most popular: again and again they are found depicted in Cretan art, as in the Toreador Fresco which decorated a wall on the east side of the palace of Knossos. It shows a boy and two girls in male attire performing with the bulls. It was probably for this sport that the yearly tribute from Athens of youths and maidens was required. Boxing, too, had a prominent place, as represented on the vase from Hagia Triadha.‡ No mention has yet been made of a pastime that one would naturally expect to find, since we are told that it is "amongst the earliest activities of men" § and that it is one of the very earliest of the arts ||—namely, dancing.

Evidences are not wanting, however, whether from literature or art, that dancing was indulged in, as in the *Odyssey* :—

The dancing floor they levelled, and they made a wide drawn ring,  
Therewith drew near the herdmen with the shrilly harp in hand,

And they beat the holy earth with their feet, and Odysseus still  
Gazed on at the feet swift twinkling, and his heart was in wonder long.\*

Or in the *Iliad* :—

Youths and maidens danced all young and beauteous.\*\*

In some of the frescoes we have the representations of these dancing scenes, as in the north wall of the Queen's Megaron.

Draughts or some similar game seems, too, to have been popular, to judge from the elaborate playing-table discovered in the palace of Knossos. The lyre and the double flute were the most commonly used musical instruments and may be seen in the Palaikastro figurines and the sarcophagus of Hagia Triadha respectively, while the sistrum is shown in the famous "Harvesters" vase.

Dress,†† at any rate that of women, was astonishingly modern. Elaborate tightly fitting bodices, puffed sleeves, and low necks were the order of the day. Bell-shaped skirts seem to have been greatly favoured, and flounces, frills, and such like adornments were freely used. The dress of the men seems to have been much less ambitious than that of the women, except on ceremonial occasions. It consisted of a loin cloth—which garment was also worn by the women—buskins and puttees and a belt to hold the weapons. The men wore turbans and feathered head-dresses on special occasions, while the hats of the women were of a size approaching those of to-day.

Having examined to some extent, though in a somewhat brief and fragmentary manner, the conditions under which the architecture of Crete was produced, we will now proceed to examine at closer quarters that architecture itself; the work which doubtless was to its builders, as to those who have had the privilege of studying it in recent years—

A vision, a delight and a desire—  
Thy builder's perfect and centennial flower,  
That in the night of ages bloomed alone.††

## V. THE PLAN.

### (a) HOUSE PLAN.

In dealing with ancient architecture, the feature which can usually be studied with the greatest degree of completeness is, as might be expected, the plan. While any part of wall or column or pier

\* Evans in *R.I.B.A. Journal*, 1902.

† Burrows, *Discoveries*.

‡ Halbherr in *Rendiconti della Accademia dei Lincei*.

§ Darwin's *Descent of Man*, ch. ii.

|| Baldwin Brown, *The Fine Arts*, ch. i.

\* *Odyssey*, VIII. 260-271.

\*\* *Iliad*, XVIII. 592.

†† Evans in *Encyclopædia Britannica*; Mrs. Williams in *Gournia*.


‡‡ Longfellow, *Giotta's Tower*.

remains standing the plan is preserved, and even when these have gone, some trace can often be found enabling the plan to be reconstructed with a tolerable degree of accuracy. In Crete the student of planning is unusually fortunate, for he has materials for study remaining from Neolithic times onwards.

When the Neolithic people advanced beyond the mere rock shelter and commenced building proper, there seem to have been two lines of development. One was in the direction of wattle and daub huts, such as those of which remains have been found in the Neolithic strata at Knossos; the other a stone type as found at Magasá. The probable reason for this dual type will be dealt with later; suffice it to say here that the plan of the hut type had practically no influence on later planning: \* it is the second or house type that is important from this point of view.

The Magasá plan,† which was after the type of A, Fig. 2, shows an approximately rectangular room, with a sort of porch or annexe on its north side. It may be taken as certain that there was an intermediate stage, no example of which has as yet been discovered, between this and the rock shelter, consisting of a single rectangular room with door (Fig. 2 B). The continuity of this Neolithic plan with the planning of the Minoan period proper, receives interesting confirmation from the plan of the early Minoan ossuary at Kastri, which is almost identical in plan (Fig. 2 C) with the house at Magasá.

It is easy to trace the development of the more elaborate plans of Minoan times from these simple beginnings. The addition of another room to the prototype plan to meet the growing needs of the family, might be made by some person of more than ordinarily inventive ability to take not the Neolithic or ossuary form, where it practically forms only a passage and so is not of much use for living purposes, but that shown in Fig. 2 E, where the door is kept directly opposite the original door, and a second useful room is obtained, with the additional advantage of more light penetrating to the inner chamber. Repeat this plan in the approved modern semi-detached style, to accommodate, say, a grown son and his family, and we get a type which is quite normal in Minoan planning, and is represented in Fig. 2 D. An opening was often knocked through in the party wall for convenience of access without the necessity of going outside.

These primitive types of plan can be traced even in the most complicated of later planning. The remarkable adaptability with which these originally distinct units are made to enter naturally and appropriately into complex schemes of planning is indeed one of the triumphs of Minoan architecture. We find the  type in the ranges of magazines at Knossos, while at Phaestos the same type has been transformed and developed, by the addition of magazines on the blank side of the corridor. There was, as has been mentioned, a tendency for each house to have its private shrine or oratory, and the back room through which there was no thoroughfare was the one usually appropriated to the purpose. This, of course, represented the original or hut element of more primitive times. In the palaces the same arrangement persisted; the Shrine of the Double Axes, for instance, is an isolated room, though for convenience there is a throughway in front of the shrine; so, too, the Shrine of the Sanctuary; and the so-called "baths" are arranged on a similar plan.

Extensive remains of ordinary domestic work are preserved to us, mostly on town sites. Gournia and Palaikastro, Phylakopi and Zakro have yielded a rich return to the labours of the archaeologist. It will probably be better, instead of trying to reduce to some sort of rule the mass of differing plans which exist—and this would be as difficult to do as it would in the case of the modern suburban villa—to describe some actual examples.

Turning first to the late Minoan plan shown in Fig. 3, we find a house standing free and roughly square in plan, with its entrance opening on to the side street. A and B, the floor of the one ornamented by lines of stucco and the other with a large slab of limestone in the centre, were undoubtedly rooms; the other spaces are only the spaces between the foundations of the walls and columns of rooms above.‡

\* The circular form of hut may possibly have had an influence on the plan of some burial chambers. There are circular tholos-tombs at Hagia Triadha, and also a series,

alongside dwellings of an exclusively rectangular type, at Koumasa, discovered by Dr. Stephanus Xanthoudides.

† R. M. Dawkins in *B.S.A.*, XI.

‡ Dawkins in *B.S.A.*, XI.

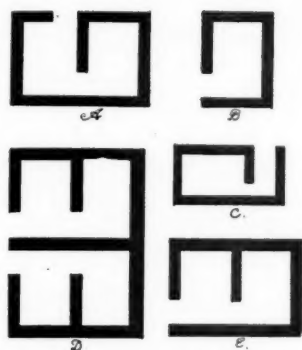


Fig. 2. Evolution of the Plan.

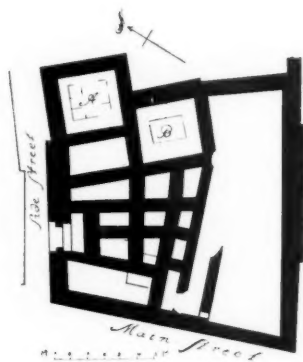


Fig. 3. House at Palaikastro.

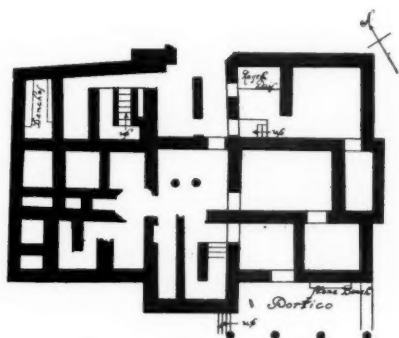


Fig. 4. House at Palaikastro.

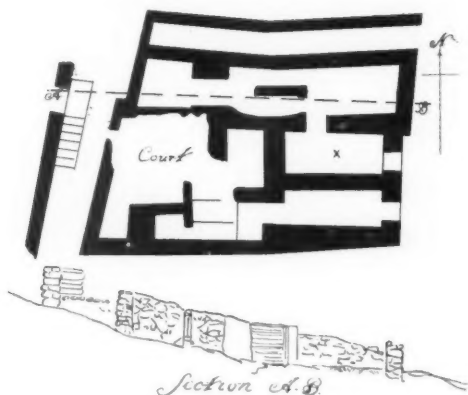


Fig. 5. House at Gournia.

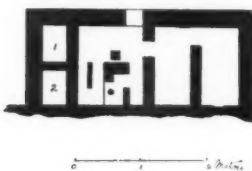


Fig. 6. House at Zakro.

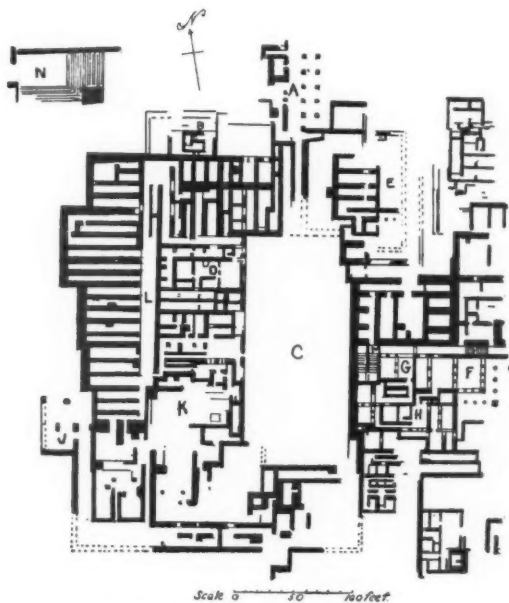


Fig. 7. Knossos: Plan of the Palace.



The irregularity of the planning marks it as being of earlier date than the next example (Fig. 4), which shows a house of two wings separated by, one might almost call it, a projecting staircase hall. A glance at the plan will reveal at once a difference between the west wing and the rest of the house. The west wing reminds one more of the plan previously mentioned; and indeed it is probably very little later in date. The centre and east wing were undoubtedly later additions dating from the period of re-occupation. The plan as a whole is a most interesting one, with its portico and entrance to the east end of the façade, its two staircases, and its interesting arrangement of rooms. One cannot help feeling that its owner must have had a fairly comfortable time.

One example of domestic work has been selected from the countless number of houses that have been uncovered at Gournia and is illustrated in Fig. 5. This, Mrs. Hawes' house A c,\* shows the ease with which these Minoan builders seem to have adapted their buildings to sloping sites: there is no need to describe the arrangement of the rooms, as this will be readily seen from the plan given. The other house plan (Fig. 6) is that of a building of Late Minoan date from Zakro. It contained eight rooms, of which those marked 1 and 2 were cellars. This house also shows that adaptation to irregular levels, of which mention has already been made. The elliptical farmhouse at Chamaizi † of M.M. I. is a building freak, and while it may be interesting archæologically is not of great architectural value.

Though the difficulty of reducing the varied plans to a consistent scheme has been mentioned, this does not prevent some very general and very broad underlying generalisations being made with regard to these plans. The plans one notices seem always to have had an antechamber into which the front door opened; from this several doors led to the various rooms, and steps led to the upper storey. A want of doorways in the basements is characteristic ‡ these rooms probably being reached by means of ladders from the upper floor. The slope of the ground, where it existed, was often utilised to get a door at street level both to the basement and the ground floor.

There seems to have been no separation into men's and women's quarters § in these houses. Each house, where condition of situation, etc., would allow it, had a free space or court in front of it, but, as in the present day, the town house more frequently had to forego this luxury. Where it did exist it might be enclosed by a wall, and was in many cases paved.

(b)—THE PALACE PLAN.

Full of great rooms and small the palace stood,  
All various, each a perfect whole  
From living nature, fit for every mood  
And change of my still soul.||

It was seen in discussing the house plan that, where it could be managed, the Minoan favoured a sort of court in front of his house. Now if the owner of the house happened to be engaged in farming or some other occupation which required a lot of storage room or workshops, the most natural place to put these would be adjacent to his house along either end of his front courtyard, as is done in so many farmyards to this day. Growing by successive additions, these outbuildings would presently creep round the corners and extend along the front, thus converting the external into an internal court.

It would be a comparatively easy and natural transition for these outbuildings, being so intimately associated with the house proper, to develop into spare rooms, stores, etc., and so become an actual part of the house. We have then, as the result of these transitions, a somewhat elongated central courtyard, whose shape is due to its original position on the main frontage, surrounded by buildings; on one side of the court are the principal domestic apartments of the house, while the other three sides are taken up by servants' quarters, stores, workshops, etc. This is precisely the palace plan, and its evolution from the smallest beginnings is thus quite easy to trace.

\* Mrs. Hawes in *Gournia*.

† Mackenzie in *B.S.A.*, XIV.

‡ Bosanquet in *B.S.A.*, VIII.

§ Hawes, *Crete*, ch. ii.

|| Tennyson, *The Palace of Art*.

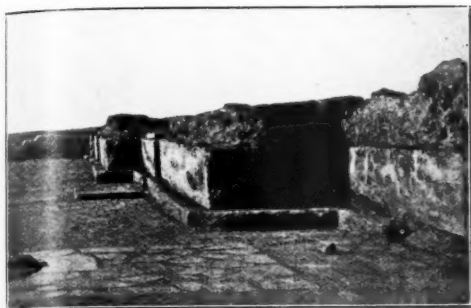


Fig. 8. Knossos: West Court from S.W. Portico.  
By permission of the British School at Athens.



Fig. 9. Knossos: One of the Magazines,  
showing Pithoi.



Fig. 10. Knossos: Hall of the Double Axes from  
the tower.



Fig. 11. Knossos: Upper Flight of the Grand Staircase.  
By permission of the Hellenic Society.



Fig. 12. Knossos: Theatral Area.  
By permission of the Hellenic Society.



Fig. 13. Knossos: Throne Room.  
By permission of the Hellenic Society.

As the general type of palace is the same in all cases, one example only will be taken for detailed description, that of Knossos.

Here the spacious Central Court c (Fig. 7) was a paved area of some 20,000 square feet. It was reached from outside by way of the north gate (A on plan), which was at the point of junction of the roads from the City and the sea-port, and consisted of an imposing portico of a double row of six piers. From this there was a narrow ascending passage into the court. Opposite the northern part of the portico was a massive tower dominating the meeting-place of the two roads, and this was faced by a massive bastion. Near this northern entrance were discovered six deep walled pits, which were probably oubliettes. East of the entrance were three terraces which were most likely made into small gardens with palms, shrubs, etc. To the west of the palace was a paved court (Fig. 8), which may have been the gathering place of the people, and here was the south-west portico (j), which seems to have served a double purpose, that, according to Evans, of the royal entrance to the palace\*—though surely not the most convenient way of reaching the royal apartments—and of a lodge for the checking and receiving of goods destined for the magazines of the palace.

Continuing round from the south-west portico there is found on the south of the building the remains of a stately Propylæum overlooking the southern terrace. This gave entrance to a hall leading to a small court, beyond which was a series of small rooms which seem to have been devoted to the use of palace functionaries. On the western side of this block was a corridor some 200 feet long, giving access to a number of magazines, one of which is shown in Fig. 9, which were mostly occupied by large jars for oil—especially during the later part of the history of the palace—but were also used for the storage of valuables. Above this section were the Halls of State, the principal approach to which was by way of the Propylæum already mentioned.

The domestic quarters were situated to the east of the Central Court, and at this point the Palace buildings were at least four stories in height. The principal rooms here were three, the Hall of the Double Axes (Fig. 7 F and Fig. 10), the Hall of the Colonnades (α), and the Queen's Megaron (η and Fig. 14), and in intimate association with these the Grand Staircase (ξ and Fig. 11), which is perhaps one of the most remarkable remains ever brought to light by the archaeologist. Speaking of it in its relationship to the Hall of the Colonnades, Sir Arthur Evans says:†

The lowermost flight of this quadruple staircase descended into a portico forming a wing of a fine columnar hall, between which and the staircase wall was a light area. . . . This hall, to which I have given the name of the "Hall of the Colonnades," is one of the finest features of the building.

North of the Domestic were the Industrial Quarters (ε), where the potters, goldsmiths, engravers and carpenters lived and worked, and where the olives were pressed and the oil washed and jarred; while forming as it were a connecting link between the Domestic and Industrial Quarters there appears to have been the school room and the quarters of the scribes who were engaged on the clay tablets.

At a point near the north gate is the theatral area (κ and Fig. 12), a paved space of some 40 by 30 feet, having tiers of steps on two of its sides, with a bastion at the angle between the two tiers. A very interesting little suite of rooms occupied a position in the west wing, with entrance from the central court, and was probably used by ambassadors and other persons of importance. There was a roomy vestibule, leading to what Sir Arthur Evans has named the Throne Room (δ on plan and Fig. 13). There was a shallow tank here for ablutionary purposes, and leading out of the Throne Room was a room which undoubtedly served the purpose of the visitor's bed room. A number of detached buildings, such as the South-East House, in more or less intimate connection with the main block, completed the Palace buildings, of many portions of which it will be necessary to speak more fully later.

Attention must now be given to a number of points of interest in the Palace plan generally. The first point which will strike the student is that these Minoan buildings seem to have been planned on rather un-classical lines: there is none of that rigid symmetry and exact duplication of parts which

\* Evans in *Journal R.I.B.A.*, 1902.

† *Journal R.I.B.A.*, 1902.



Fig. 14. Knossos: View from S.E. Corner of Queen's Megaron.

By permission of the British School at Athens.

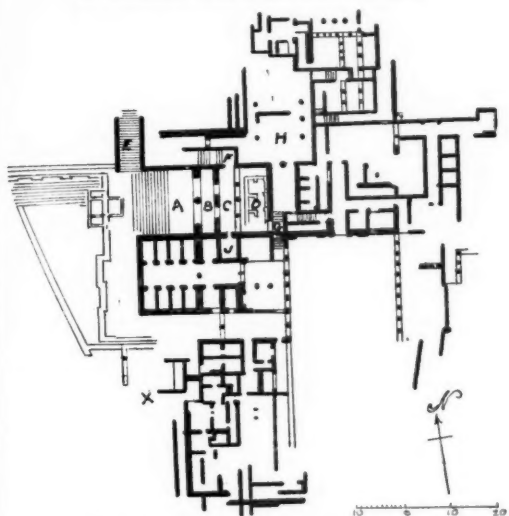


Fig. 15. Phaestos: Plan of the Palace.



Fig. 16. Phaestos: The State Entry.

is found in buildings of later times; the Minoan building seems more like one of our old and rather rambling English manor houses than, say, a building of the Periclean age. To say this, is not, however, to disparage the planning of these places. In nothing, perhaps, do the old Cretan architects show so much skill as in their plans. The skilful way in which the domestic quarters at Knossos are shut off from the more public portions of the building is only one example of this. They are quite secluded, yet easily accessible. The dog's leg corridor (Fig. 14), as a further means of secluding the Queen's Megaron from anyone who might chance to be in the Hall of the Double Axes, was a masterly device which effected perfectly the purpose for which it was intended, though at the cost it must be admitted of a rather serious loss of light in the corridor. Nor, again, must this want of rigid symmetry be taken as in any way indicating lack of stateliness and dignity. The stately line of approach of the South Propylæum at Knossos, with its triple doorway leading into a roomy hall; the entrance to the Domestic quarters by way of the Hall of the Double Axes, with its rows of columns and piers, and the splendid staircase leading to the upper floors and the imposing state entry at Phaestos, all prove beyond any reasonable doubt that the Minoans were keenly alive to the value of scale and right combination of parts as elements in the production of a successful design.

The chief rooms, in the state portions of the palaces, seem to have been arranged above a basement of less important offices, magazines, &c., and the chief entrance was often by way of a staircase from an upper terrace level,\* as in the Domestic quarter at Knossos, the South-East House and the Royal Villa. Unfortunately, the great halls of state do not remain to us, and perhaps, even with the knowledge we have of Minoan remains, if we could be allowed a view but for a moment of those halls in the days of their perfection we should be astonished at what was presented to our view.

Differences of levels seem to have been the architects' special opportunity. Their skill in

\* Evans in *B.S.A.*, IX.

dealing with problems of this nature is shown admirably in the treatment of the Domestic quarter at Knossos. Advantage was taken of the slope of the hill—which was further cut away where required—to obtain a terrace twenty-five feet below that of the central court on which to commence building operations, and by so doing it was possible to erect the four-story block already mentioned, which had easy access to the court from the upper apartments, was sheltered from the northerly winds, and must in addition have given an imposing elevation.

Nowhere perhaps is the architect's skill in planning shown better than in the state entry at Phaestos (Figs. 15 A and 16). A difficult problem presented itself for solution, namely, to properly correlate and bring into a single whole, two sets of apartments at differing levels. In the Southern portion of the buildings were the principal apartments of state, over a ground floor of less important rooms; to the North, at a level intermediate between these two, was the Ground Floor of the domestic apartments. How was the principal entrance to be arranged with regard to the claims of these different levels? A less competent architect than he who designed this state entry would have given up the task as hopeless, brought his entry into relationship with one floor, and left the rest to come in anywhere. Not so the skilled designer who was responsible for the work. His mind seized the possibilities offered by the very difficulties of the situation: here was an opportunity for masterly planning not to be lost, a chance to show what really could be done. The true solution, in the designer's mind, was to place his entrance portico and its adjacent areas on a different level from all those which it had to serve, namely, midway between the ground floor of the domestic and of the state parts of the Palace. By this means a broad and imposing flight of steps was obtained leading up to the portico (Fig. 16). At the top of the ascent was a spacious landing leading through a typical central columned portico (b) into a sort of crush hall or vestibule (c), at the back of which, separated from it by three columns on a limestone stylobate was a light well (d) of the usual type, but which has been unaccountably mistaken for a megaron by Dörpfeldt and Noack. On the north side of the stairs and landing was probably a loggia, while on the opposite side there was undoubtedly an upper hall above the magazines, to approach which was one of the chief objects of the existence of this state entry.

The entrance was brought into proper relationship with the north wing of the Palace by means of a staircase (e) opening off the north end of the vestibule, which was closed by a door controlled from the stairs side. Communication to the women's quarter was by a door in the east wall of the light well, leading on to a staircase running north and south (g), which in its turn led into a peristyled court (h), both the staircase and court being lit by means of windows from the light well. Southwards the staircase led into the southern portion of the Palace. At the south end of the vestibule a porter's lodge (j) was cleverly contrived, and from this point perfect supervision and control of all the doors could be maintained.

The earlier Palace plans seem to have been quite as extensive as the later ones. The earlier halls of the west wing of the Palace at Knossos were exactly the same size as the later ones, while in one instance at Phaestos an earlier hall appears to have been even larger than the later one.\*

The primitive isolation of rooms is apt to disappear when the rooms become units in an architectural system, and especially is this so in Crete, where the system of division by colonnades of piers or columns and of consequent intercommunication between room and room, as shown for example in the Hall of the Double Axes (f, Fig. 7 and Fig. 10) was greatly favoured by the Cretan architect. These arrangements do not pre-suppose any want of privacy, however; the openings are known to have been in many cases fitted with doors which could be closed when required, and in other situations where doors were impracticable, or were not for some reason desired, a system of curtains would supply the deficiency.

This system of colonnades had several most important results: it made the problems of lighting easier of solution; it forced the architect to pay more careful attention to the relationships of room to room—there was not the opportunity to hide bad planning behind the mask of blank walls—and it

\* Mackenzie in *B.S.A.*, XI.



gave opportunity for a number of smaller units to be brought into relationship as parts of a larger scheme: the Hall of the Double Axes, which has already been so often referred to, being an excellent case in point. Had solid walls been used here a series of small and unimportant rooms would have been the result, but by the separation of the adjacent areas only by colonnades an area of over twice what would have otherwise been available could be used as a single chamber. This was probably in use as a reception room,\* the throne occupying a position in the centre of the north wall, approach being given by the eleven openings of the colonnades. It is not difficult to picture the dignified and imposing effect thus obtained, and the more one considers it the greater is the admiration which will be aroused for the men who, centuries before "The Glory that was Greece," could scheme out such effects.

The number and importance of the light wells which have been discovered justify the conclusion that they formed in conjunction with the colonnades the chief means of lighting, either directly, in the case of the rooms of which they formed part, or indirectly by means of windows. Enough has already been said in speaking of the state entry at Phaestos, to show the great skill with which they were introduced, and a glance at any palace plan will furnish plenty of other examples. These light wells were not, according to Sir Arthur Evans, exclusively what their name implies,† but were also used as a sort of private chapels, &c., even in some cases being partially roofed over.

A word must be said as to the use of windows for lighting staircases: something has already been said on side lighting, the example particularly referred to being Phaestos. Another and most effective method was in use—one that is a favourite with the architect to this day—that of a window on the staircase landing. To take the case of the Royal Villa (Fig. 17), here we have a staircase with a central flight dividing on the first landing into two; on this landing was a large window which lit effectively all three flights. Both at the South East House and at Hagia Triadha a similar arrangement was in existence: at the latter the window also served to light two corridors. These double-headed staircases must have been very effective in appearance; as Sir Arthur Evans says,‡ "It is difficult to avoid the conclusion that this arrangement of a staircase with a double head was adopted by the architect simply with an eye to symmetry and grandiose effect."

The question of the Theatral Area is a most interesting one. It seems to have existed on every palace site; as at Knossos (Fig. 12), Phaestos (fig. 16), and Gournia. In every case the plan is the same: two rows of steps joining at right angles. At Phaestos there is a paved platform at the top of the long range of steps which was originally backed by a massive wall supporting an upper terrace.§ The use to which these areas were put has been the subject of much discussion. Undoubtedly, as the name which has been given to them implies, they were centres of sport where the people would assemble from time to time to see various contests, boxing, dancing, &c. The size of these areas—that at Knossos is, as has been said, about 40 by 30 feet—precludes the possibility of their having been used

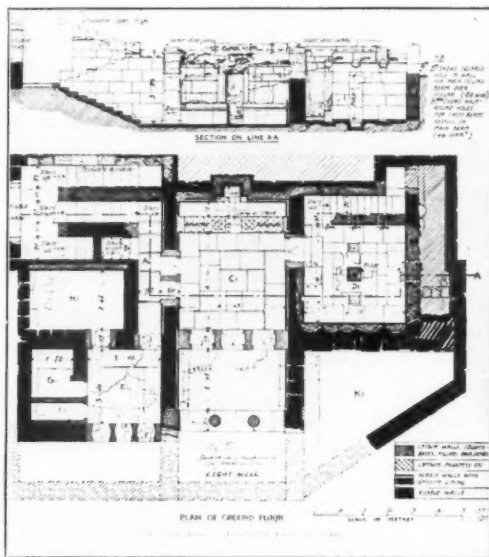


Fig. 17. Royal Villa, Knossos: Plan of Ground Floor.

By permission of the Hellenic Society.

\* Evans in *B.S.A.*, VIII.

† *B.S.A.*, XI.

‡ *B.S.A.*, IX.

§ Pernier, *Lavori eseguiti nel Palazzo di Phaestos*.

for the favourite sport of bull baiting. Sir Arthur Evans thinks,\* from the way in which the steps overlap and are keyed into one another, that the designers of these areas fumbled about after the idea of seats in a continuous semicircle, but did not manage to hit upon it.

Speaking generally, the existing palaces give plans of great regularity and basic simplicity: angles are right angles, and walls parallel; the most difficult problems of planning are treated in a straightforward and workmanlike manner, and differences of level and upper stories are ordinary matters of everyday occurrence and are dealt with most successfully.

(c) THE PALACE PLAN AND THE MAINLAND TYPE.

An observant student of Minoan architecture is bound to be struck by the great dissimilarity between the plans of the Cretan palaces and those of the mainland. Yet it has been agreed that the people of these various mainland towns sprang from the same peoples as the Cretans, and were indeed in a very real sense part of the same civilisation. Why then this difference? If the origin of the people, and consequently of the plan, was the same, the subsequent development ought naturally to be on similar lines.

The explanation is, that the final results were merely the outcome of a gradually divergent development owing to difference of climatic conditions, or, to put it in the words of Dr. Mackenzie: †

The process of differentiation at the opposite poles of Crete and Thessaly respectively, took place on gradually diverging lines. And it is this process of gradual differentiation that accounts for the enormous difference in character in the final outcome of architectural design as represented respectively by the palaces of Crete and those of Arne, Tiryns, and Mycenae.

The whole question may be said to centre round the two types of hearth—fixed and portable. In Crete, where the climate was warm, a portable brazier was all that was required for heating purposes, but further north, at Mycenae or Tiryns, the greater rigour of the winter climate would require a fixed fire of respectable dimensions. The fixed fire would require a smoke-hole in the middle of the roof; so no upper story could be built over the lower room. Again, with a fire in the centre of the room no throughway could be allowed; entrance and exit must be from one side of the room; otherwise the draughts would cause the smoke to whirl and eddy about and go anywhere except out of the opening intended for that purpose. This blocking of throughway would cause to spring up, before very long, a system of surrounding corridors by which it would be possible to get from one room to another without passing across a third. Thus a system of disconnecting corridors would come into being merely on utilitarian grounds, and a plan such as that of Tiryns would be the result. In addition, the increasing rigour of climate would make undesirable the number of openings which allowed of such thoroughgoing intercommunication between room and room in Minoan palaces.

The necessity, too, on the mainland of keeping the whole building within the fortifications, meant that there would be a certain crampedness and want of room compared with Minoan palaces, where no fortifications had to be considered as none existed: there were none of "these tough walls" ‡ to withstand siege which are found on mainland sites, the Minoans preferring to trust to their navy rather than to walls, and only taking precautions, as in the northern entrance at Knossos, against robbers or perhaps a riot amongst the people. There can hardly be any question as to which set of circumstances produced the finer plans, and this difference in style gives what is perhaps one of the clearest object lessons we could desire as to the importance of such points as geographical conditions in determining the plan.

(To be continued.)

\* B.S.A., IX.

† Mackenzie in B.S.A., XI.

‡ *Iliad*, XXII. 6.

## REVIEWS.

## TREATMENT OF OLD COUNTRY HOUSES.

*Small Country Houses: their Repair and Enlargement. Forty Examples chosen from Five Centuries. By Lawrence Weaver. 40. Lond. 1914. 15s. net. ["Country Life," 20 Tavistock Street, Covent Garden.]*

Following so soon after Mr. W. A. Forsyth's Paper\* on "The Repair of Ancient Buildings," Mr. Lawrence Weaver's new book on "Small Country Houses: Their Repair and Enlargement" is indeed a sign of the times. As a believer in a living architecture one cannot, however, admit that it is an entirely healthy sign that so many folk now prefer to "rough it," to some extent, in an old house with its frequent and familiar discomforts, rather than to live in a "purpose-made" house designed by a competent architect; but the fact remains that the former proceeding is now rather fashionable, and, that being so, it is only fitting that *Country Life* should endeavour to educate the public it has so long fascinated with such a fine series of photographs of beautiful old buildings.

If only present-day opinion had ripened a century earlier, how much richer should we be in unrestored monuments of the past! But since so many are gone, it behoves us, especially architects, to care for and lovingly preserve what is left. It would be presumption for us arbitrarily to decide whether this or that is beautiful and worthy of preservation; the broader view should be taken that when a structure is reasonably old it is history and should be treated with the reverence one has for an Old Master. Fashion is so fickle that what is considered ugly to-day may very well be admired to-morrow, and *vice versa*. Whatever our private opinions may be of any particular building or feature thereof, they should be rigorously suppressed if such opinions are at variance with one's own idea of what is beautiful. Of course it is sheer affectation to copy exactly the work of the past: it is not art, nor is it sincere. Therefore if we must repair or adapt, let us do it in an unobtrusively distinctive and modern manner, always harmoniously and without destroying.

Mr. A. C. Benson† lately remarked, with much truth, in speaking of the wrong kind of modern restoration, that it "... is not a departure, it is a tame virtuosity, desiring if possible to reconstruct a vanished atmosphere without any real knowledge of what that atmosphere actually was..." In fact, it is as unreal as many of the historical pageants that were so prevalent a few years ago. It must be admitted that it is not easy to reconcile any modernising process with the preservation of the charm of age, but nevertheless this frequently has to be attempted; how successfully, in many cases, may be judged from the photographs reproduced in Mr. Weaver's book.

He rightly emphasises the point in his Introduction, which may be read and re-read with much profit by all who have charge of ancient buildings, whether as owners or otherwise.

The illustrations here reproduced, by the courtesy of the publishers, from the early pages of the book, show quite painfully the evils of conjectural restoration and how easily the beauty of age can be ruthlessly destroyed within a few days. The Guildhall at Lavenham, Suffolk, is a case in point, and the pity of it is that the unfortunate result was entirely unnecessary, and therefore avoidable. The other example, from the same county, is of less importance, but the actual house to-day is even more amusing than the photograph (taken while the "restoration" was in progress) shows it to be.

As a contrast to these the book itself contains typical examples of old houses rightly repaired or enlarged. These extend to two hundred pages, and are selected from the works of architects with a real appreciation for the work of our forefathers. By the time one has reached the end of so appetising a meal, one has almost forgotten that the *hors d'œuvre* was so thoroughly indigestible (vide Illustrations I., II., III., IV., V. and VI.).

Especially successful is Mr. William Weir's repair and adaptation of the Town Hall at Watlington. The author very naturally singles it out for praise. Sir Lawrence Gomme's "The Mound," at Long Crendon, Bucks, cleverly converted by his son, Mr. Austen Gomme, is irresistible in its charm. Mr. Basil Stallybrass (like Mr. William Weir) is referred to in the heading of chapter ii. "as an exponent of the S.P.A.B. principles," and right well do both these architects follow them.

Some good brickwork by Mr. H. M. Fletcher is shown in chapter xxxi., and mention should also be made of Mr. Walter Cave's admirable treatment of Mr. and Mrs. Asquith's little riverside retreat at Sutton Courtenay, Berkshire. A less experienced architect—yielding perhaps to the pressure of a client—might easily have fallen into the trap of more or less imitating the old timber-framed building, but Mr. Cave knew better, and wisely designed his new building in a manner dissimilar to the adjacent existing work, precisely in the same spirit that a builder of the seventeenth or eighteenth century would have approached his task. There is nothing in the least discordant about the juxtaposition of the two types of building.

Mr. Weaver endorses this view, which is one that is gaining ground daily, thanks primarily to the well-sustained persistence of the Society for the Protection of Ancient Buildings (from the time of its inception by William Morris nearly forty years ago), which was never allowed to flag for a moment, in the face of much hostility, under the able and energetic guidance of Mr. Thackeray Turner.

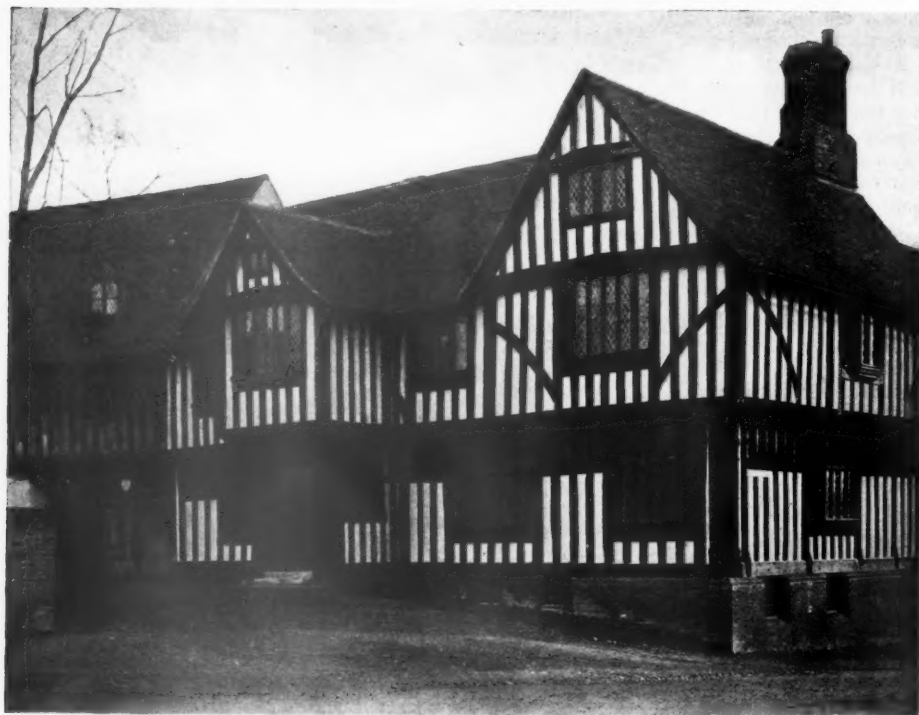
*Country Life* has ever been the enemy of shams and "fakers," and it has consistently furthered

\* JOURNAL R.I.B.A., 20 Dec. 1913.

† In an address on "The Beauty of Age," read before the Society for the Protection of Ancient Buildings at the general meeting on 19th June last, published in their Annual Report and in the *Cornhill Magazine* for July.



THE GUILDHALL, LAVENHAM, BEFORE ALTERATION.



THE GUILDHALL, LAVENHAM, AFTER ALTERATION.



AN EAST ANGLIAN HOUSE, BEFORE "RESTORATION."



AN EAST ANGLIAN HOUSE, AFTER "RESTORATION."



the cause of sincerity in architecture, but no book is likely to do more for that cause than Mr. Lawrence Weaver's opportune and very welcome *Small Houses: Their Repair and Enlargement*.

One might wonder, with the eagerness of a reader of serial stories, what is to be the fate of "A derelict awaiting repair" (at the very beginning of the book), but there need be no anxiety on this account, for it is now in the hands of Mr. Harry Redfern. Let us hope that his treatment of it—for a sympathetic landlord—may be one of the delights that a possible sequel to this interesting book may have in store for us.

BASIL OLIVER [A.]

### ARCHITECTURAL DRAWING.

*Shades and Shadows, with Applications to Architectural Details and Exercises in drawing them with the Brush and Pen.* By William R. Ware, formerly Professor of Architecture in the Massachusetts Institute of Technology. 4s. 1912. [International Text-book Company.]

This businesslike book is written with that originality and thoroughness which are characteristic of Professor Ware's welcome contributions to architectural educational literature. The revival of the employment of shadows and rendering is looked upon by some merely as a fashionable trick of draughtsmanship. But the study of the phenomena of light and shade and its effect on the appearance of solid forms is in reality of paramount importance to the architect. It is striking to note that when in this country the practice of indicating shadows was allowed to fall into disuse, the period was remarkable for an unequalled poverty of conception in design. As the author points out, the problems presented in architectural drawings are few and comparatively simple, and are of such frequent occurrence, under almost identical conditions, that they can advantageously be solved once for all and the results formulated for future use.

The book is arranged in two parts, the first preceded by an Introduction dealing with the phenomena of light and shade—direct, diffused, and reflected—on rough, smooth, and polished surfaces of various materials. The two parts deal respectively with rectilinear solids and curved lines and solids of revolution. In each part the more theoretical exercises are followed by "Architectural Applications," showing the systems applied to familiar architectural forms, a method which has the double advantage of combining branches of elementary study and of direct utility. In addition to these chapters, projection, perspective, and trigonometrical terms are explained in an appendix. The short article on perspective is suggestive and to the point, but while there are, of course, many advantages in placing the object at angles of 45 degrees to the picture plane, one cannot agree with the statement that this is usual in oblique perspective; or, again, that "the advantages of adopting any other angle would be equally well secured by setting the object over to the left or right."

A great number of problems are worked out, and in cases where there are several methods of solution all are given—a principle which, as the author says, is calculated to secure for the study of shades and shadows the educational and disciplinary advantages which are often sought to be obtained by the study of the more indirect and artificial procedures of descriptive geometry.

The numerous line illustrations are clear and often very ingenious in conception. The practice of giving in many cases perspectives and perspective plans in addition to the orthographic projections should prove a great help to the student in exercising his imagination in terms of three dimensions by means of graphical discussion.

The profession is fortunate in having the results of the researches of such an authority as Professor Ware available in such convenient form, and the student who masters the contents of this volume will be fully equipped as far as these branches of draughtsmanship are concerned.

LESLIE WILKINSON [A.]

### Autumn Publications.

Messrs. B. T. Batsford announce the following:—

The English Parish Church: an Account of the Chief Types of Buildings produced in England during Eight Centuries. By the Rev. J. Charles Cox, LL.D., F.S.A. With over 350 illustrations reproduced from photographs and drawings, including a specially prepared series of plans.

Bruges. A Record and an Impression by Mary Stratton (Editor of "Fellowship Books"). With 120 drawings specially done for the work by Charles Wade. La. 8s. Chapter V., which gives an interesting analysis of Bruegan domestic architecture, is contributed by Mr. Arthur Stratton [F.]

Batsford's "Library of Decorative Art" (size 14 inches by 10½ inches):—

(1) Decoration in England, from 1660–1770. By Francis Lenygon. With over 350 illustrations.

(2) Furniture in England, from 1660–1750. By Francis Lenygon. With over 400 illustrations.

(3) Tapestry Weaving in England, from the Earliest Times to the end of the 18th century. By W. G. Thomson. With 57 illustrations.

### A Town Planning Text-book.

The National Housing and Town Planning Council announce the publication, on the 1st October, of a concise History of the Town-Planning Movement, combined with a Text-book on Town Planning, written by their secretary, Mr. Henry A. Aldridge, with an appendix by Mr. Frank M. Elgood [F.] and Mr. Edmund R. Abbott (solicitor), respectively Chairman and Clerk of the Ruislip-Northwood Urban District Council. Mr. Aldridge's share of the work is in two parts—I. The Case for Town Planning; II. A Practical Manual for the Use of Councillors, Officers, and others. The Appendix consists of the annotated text of the Act and of the Procedure Regulations, the various notices, advertisements, certificates, etc., required, and the text of the Birmingham and the Ruislip-Northwood Town-Planning Schemes.

## THE TOLL OF BARBARISM.

*Without being able to plead even military exigencies, and solely for the pleasure of destruction, the German troops have subjected Rheims Cathedral to a systematic and furious bombardment. At the present moment the famous basilica is no more than a heap of ruins. The Government of the Republic finds it necessary to denounce to universal indignation this revolting act of vandalism which, by handing over to the flames a sanctuary of our history, has robbed humanity of an incomparable portion of its artistic patrimony."*—THE FRENCH GOVERNMENT'S PROTEST.

THERE are many things in the world which can never be paid for. The destruction of Louvain, Dinant, and Rheims Cathedral can never be paid for, and can never be atoned for.

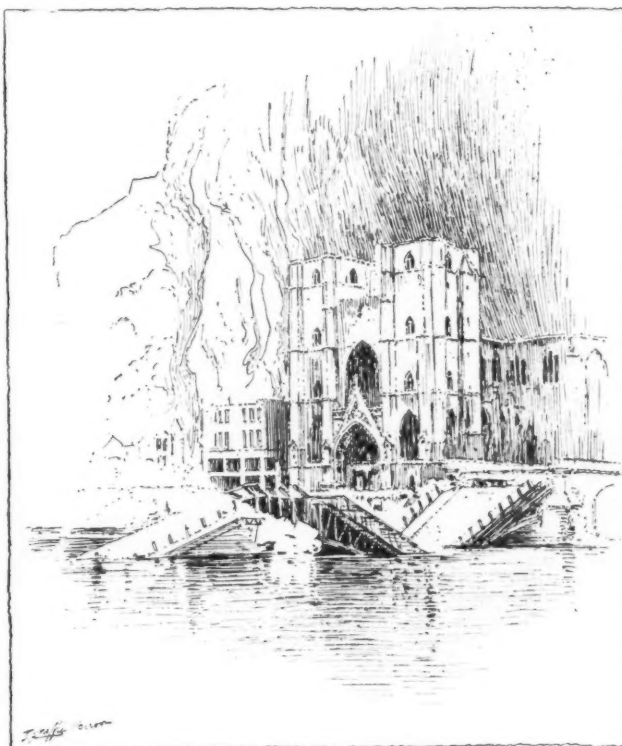
How and why the word "culture" was brought forward on behalf of the Germans it is hard to know. But Germany has now added to all its diplomatic follies (which have placed it in the wrong before the whole world) a crowning crime against the world of art and culture. Objects of enduring beauty and delight which graced the fair lands of France and Belgium and gave everlasting pleasure to the wide world are being destroyed, from no other motives than those of blind barbarism and revenge. Nothing can ever reinstate German rulers in the eyes of the world of art after such brutal acts as these. No millions of war indemnity and no wild glut of revenge could ever undo the harm and loss. Germany has injured the world past all reparation.

It must always be borne in mind that a church like that of Notre-Dame at Dinant is not only of value in itself, but stands as the central feature in endless views of beauty up and down the Meuse. We may, in serene heights of pure architectural thought, reflect on the oddities and incongruities of the bulbous-shaped spires of Belgium, but who would have wished to dismantle the steep tower roofs and curious spire of Notre-Dame at Dinant? It has never been suggested that this pure thirteenth-century church should be more suitably crowned, and, now that the roofs and spire are gone, shall we be likely to see a thirteenth-century restoration of the upper portions of the church which have been blown away? Such picturesque beauty spots which have grown up from the traditions and genius of the Belgian people are dear to us all, and we view with dismay and horror the insane folly and blind fury which cause their destruction.

The picture of Dinant as we knew it with the picturesque spire and sturdy towers of Notre-Dame dominating the old houses and graceful bridge, outlined against a beautiful background of wooded rocks and set in a foreground of placid river, is gone for ever



Dinant as it was



Dinant as it is

as the consequence of war against a ruthless and barbarian foe.

It is difficult to realise the loss the world has suffered at Rheims. This great cathedral church, where the ancient kings of France were crowned, which sums up in its fabric the unity of Gothic art, which has been styled the Parthenon of French national art—this was the heritage whose loss we mourn. When we think of its great west front, its glorious glass, its typical mediæval sculpture, its endless features of interest and charm, words fail to express the loss to the architectural world. The whole profession is in protest against the wicked and senseless folly which dooms such records of human genius to the flames. In face of such disasters as these we are at first struck dumb, but one would like to think that the Royal Institute of British Architects would in some way voice the indignation of its members, and at least place on record its reprobation of such a crime.

T. RAFFLES DAVISON [*Hon. A.*].

Sir THOMAS JACKSON, R.A., in a letter to *The Times*, says:—

The loss to art by the destruction of Rheims can hardly be conceived. In it French Gothic reached its climax. It had advanced a step beyond Chartres, which has about it still something tentative, and it stopped short of the incipient weakness of Amiens. It was the very crown and flower of French Gothic. The apse and chapels of Jean d'Orbais set the pattern for all that followed, and have never been surpassed. "This is how we must do the work at Cambrai," wrote Wilars de Honecort against the sketches he made of them while the walls were rising. The sculptures were unrivalled even by those at Chartres, and were finer than anything at Amiens. The groups of the Annunciation and Salutation in the west portal were comparable to the antique, with an added spirituality wanting in ancient art. The clerestory was filled with glorious glass of the 13th century like that at Chartres, Bourges, and Canterbury. All, or nearly all this we must have lost irreparably. The glass must have been blown out by explosions, and the lovely statuary must be shattered and defaced. How much of the main walls and the great arcades with their beautiful capitals, or the storied west front with its wealth of imagery both inside and outside, is capable of repair and preservation we shall hope to know before long. I fear there will be little enough.

We are told there was no military reason for this outrage. The Cathedral was, in fact, serving as a hospital for German soldiers, who barely escaped destruction by the shells of their own side. Its ruin was simply an act of brutal savagery to glut the rage of an invader disappointed of the conquest of which he had made sure. And where is it to stop? Noyon, with a great cathedral scarcely less important to art, is not safe; Laon, with its stately nave and its five

steeple, is at the enemy's mercy; St. Quentin, with its fine church and its delightful Hôtel de Ville, lies in the path of his retreat and may share the fate of Louvain.

## OBITUARY.

The late Edward Ingress Bell.

I am asked to write a short personal note of my late friend, as a man, and I wish I had his own literary skill to do justice to the subject. It is said that some men are so endowed that they pass through life without making enemies; if it is so, most certainly Ingress Bell was one of them. Gifted with a charming presence and personality, his sympathetic nature had the happy faculty of extracting the good out of all with whom he came in contact and leaving them better than he found them. Superior in endowment to most men he met, he was careful not to assert it.

Among his friends in early life was W. Eden Nesfield, with whom he worked of an evening and for whom he always retained a great admiration. J. F. Bentley was another of his lifelong friends, and he delighted in reminiscences of both of them. His architectural work was his main interest in life, but by no means his only one. A loyal Fellow of the Royal Institute of British Architects, he was always ready to support it, but he was in no sense a party man and took little interest in architectural politics; he read several delightful papers, full of literary merit, before both the Institute and the Architectural Association. A keen though kindly critic, he was enthusiastic in his admiration of the work that appealed to him; when it did not, he simply passed it by on the other side. He won the devotion of all the staff with whom he worked, who would have done anything for him. Of a retiring disposition, it was difficult to persuade him to make a speech, but he could do so when he chose with great effect, as we all knew at our friendly office dinners, when in a few words he would say exactly the right thing in perfectly chosen language. Shakespeare, Thackeray and Charles Lamb were his favourite authors, and he would quote from them with extraordinary accuracy and appropriateness, and was also a delightful raconteur.

Bell and I carried out a large amount of work together without any agreement other than an occasional letter between us, and without difficulty of any kind, and when the time came, through failing health, for his retirement we separated with much regret, and I can only say for myself that without him life can never be to me the same again. He was first of all an artist in all his work and in his outlook on life. This never left him though he had to work hard to maintain himself and his family. Accustomed at the War Office to large schemes, he was equally skilful in laying out a large plan and in raising an elevation upon it, the two being practically worked out simultaneously. He was a very fine draughtsman, and at the same time was thoroughly practical. A man of extra-

ordinary though restrained energy, he has left a worthy monument behind him in the large amount of beautiful work that he did and in the devotion of his friends. Though fully equipped with archaeological knowledge, he was never a copyist in any sense.

Bell had in a marked degree the saving sense of humour and kindness, which carried him through the troubles and anxieties of life without embittering him. He was deeply interested in the War, but never doubted we should win through; he used to say that "this was no ordinary war, and that it would have a great dramatic ending." We shall see! When some four years ago ill-health came he uncomplainingly laid aside his work, though with the greatest regret, disposed of the house which he had built for himself at Sutton, and retired with his family to Worthing, a favourite place of his. There he was devotedly attended by his wife and daughters to the end, which came suddenly and painlessly, and he was laid to rest in the cemetery at Worthing on a cloudless day surrounded by his family and a few faithful and lifelong friends. *R.I.P.*

ASTON WEBB [*F.*].

By the death of Mr. E. Ingress Bell the profession has sustained a severe loss; and to those who knew him, especially the younger members, to whom he was ever a friend, his death will be deeply deplored. It was my privilege to know him for many years, first as one of his assistants, then as a friend. It was always a delight to me to work for him, ever full of encouragement and enthusiasm, ever ready to help with his wide professional knowledge and artistic sympathies. He was the truest of friends, a most lovable man, possessed of an old-world charm and courtesy which endeared him to all. In spite of his great attainments he was singularly modest and retiring, and it was characteristic of him that, where possible, he avoided publicity and eschewed honours, preferring rather to accomplish his work and remain in the background. Such was Ingress Bell as I knew him. He has gone full of years and honour—his gain, our loss.

W. BEVAN [*F.*].

Edward Ingress Bell was specially educated for the profession by his father, himself an architect (and for a time clerk-of-works for Sir Gilbert Scott), and was afterwards placed by him in the office of Mr. Thomas Page, C.E. From there he went to the office of Sir Charles Barry, and subsequently to that of Mr. Joseph Hansom. He commenced practice in London in 1860 with Mr. H. V. Bacon, and in addition to his private practice was for many years employed as "First Class Surveyor" in the War Office. Among his earlier works were the following:—schools at Brent's Court (Southwark), Bungay, Guildford, Windlesham, Bagshot, Orphanage and Schools at Kilburn, the Masonic Hall at Ipswich; St. Joseph's Church, Guildford; Restoration of St. James's Church, Icklingham; Church House and Schools at Cater-

ham; important country houses, including Dedworth Manor, Clewer, and The Grange, East Sheen, and residences at Watford, St. Albans, Catford Bridge, Kilburn, Sutton, etc.

In the early 'eighties Mr. Bell became associated with Sir Aston Webb in the competition for the Admiralty and War Offices, with the result that they were included in the second competition and were awarded the third premium. The same architects won the open competition for the Victoria Law Courts, Birmingham, and the Christ's Hospital Schools, Horsham, both of which buildings they carried out. They also erected in collaboration the Birmingham University, the Metropolitan Life Assurance Society's building in Moorgate Street, the Royal United Service Institution in Whitehall, additions to Caius College, Cambridge, the rebuilding of the Museum at St. John's, Newfoundland, etc.

Mr. Bell was elected an Associate of the Institute in 1866, and Fellow in 1894. He had served on the Art Committee, acting for a time as Hon. Secretary, and had assisted the activities of the Institute in various other directions. His contributions to the transactions at general meetings include Papers on "The Criticism of Architecture" [*TRANSACTIONS*, 1868-69, pp. 148-160], "The Modern Barrack: its Plan and Construction" [*TRANSACTIONS*, 1880-81, pp. 15-40], and a short Paper on the Treatment of Terra-cotta [*TRANSACTIONS*, 1892-93, pp. 207 *et seq.*]. He retired from practice in 1909, being then in his seventy-third year.

#### The late Mrs. Arthur Cates.

It is with great regret that we have to announce the death of Mrs. Arthur Cates, who passed away after a short illness on the 19th of last month. The late Mr. Arthur Cates was a tireless worker in promoting the objects of the Institute, and one of the most active members it has ever possessed. After his death Mrs. Cates maintained the interest shown by her late husband in the philanthropic work of the Architects' Benevolent Society. No necessitous case was brought to her attention without receiving her sympathy and help. To the Library of the Institute she made considerable gifts of valuable books, now contained in a book-case which she also presented, and which formed part of Mr. Cates's library. Her latest gift was the large collection of photographs of architectural subjects collected by Mr. Cates on his foreign travels, together with the cabinet in which they are preserved. The Institute has lost a friend and benefactor by her death; and those to whom she was personally known will not readily forget her amiable and kindly qualities.

RUDOLF DIRCKS, *Librarian*.

The deepest sympathy is felt by the Institute with its esteemed Hon. Fellow, Lord Plymouth, whose gallant son, Lieut. the Hon. Archer Windsor-Clive, fell in one of the earliest fights of the War.





9 CONDUIT STREET, LONDON, W., 26th September 1914

### CHRONICLE.

#### The War : Destruction of Architectural Monuments.

The following correspondence has been handed in for publication :—

11th September 1914.

*His Excellency, The American Ambassador—*

SIR,—In conjunction with the Royal Academy, the British Academy, the Society of Antiquaries, the Society for the Protection of Ancient Buildings, the National Trust, and the Art Workers' Guild, this Institute desires to appeal to you to enlist the influence of the United States of America in a matter which is felt to be of serious importance.

The destruction or damage by the Germans of many fine old buildings at Louvain and Malines, besides lesser works of ancient architecture in France and Belgium, gives good cause of fear for the safety of some of the very finest mediæval and other buildings of France. Therefore it is that we appeal to you, not only for our own satisfaction, but also in the interests of civilisation and particularly for the sake of posterity, to request your Government to make strong representations to the German Government to insist that the armies of that country respect all old buildings having historic or architectural interest, and all works of art or the buildings that contain them.

We firmly believe that representations on this subject on the part of the United States of America would carry very great weight with the German Government, and, having regard to the unanimous expression of regret at the destruction or damage which has already occurred, we sincerely trust that you will see your way to do all that you can to secure the intervention we suggest.

I have the honour to be, Sir,

Your obedient Servant,

ERNEST NEWTON,  
*President of the Royal Institute of  
British Architects.*

[REPLY.]

*Embassy of the United States of America,  
London : 14th September 1914.*

*Ernest Newton, Esq., A.R.A., President R.I.B.A.—*

SIR,—In reply to your letter of the 11th September,

the Ambassador desires me to say, in reference to the request made by you, in the name of the Royal Institute of British Architects, that the Government of the United States make representations to the Government of the German Empire to the effect that buildings having an historical or architectural interest be respected in military movements, that your communication has been referred to the Department of State, Washington, for its consideration.

Yours faithfully,

JORDAN HERBERT STABLEY.

*Second Secretary of Embassy.*

#### The Architects' War Committee.

11th September 1914.

*The Rt. Hon. J. A. Pease, P.C., M.P.—*

SIR,—The Royal Institute of British Architects, feeling it to be their duty in this national emergency to arrange for such collective action by the architectural profession as may be found to be desirable, have, with the co-operation of members of other architectural bodies, formed an Architects' War Committee which is broadly representative of the whole of the profession in the United Kingdom.

This Committee desires to offer to His Majesty's Government an assurance of the loyal and energetic support of the profession in any direction which may be found to be practicable and desirable.

It is felt that the Imperial Government is best able to indicate what form of assistance would be of most value to it and the Committee would welcome any suggestion from the Government in this direction.

The Committee is prepared to furnish information on all matters in which the State may require the services of architects in any part of the United Kingdom during the period of the war and to give advisory assistance in connection with any schemes of construction which the Government may contemplate in this emergency.

We have the honour to be, Sir,

Your obedient Servants,

ERNEST NEWTON, P.R.I.B.A.,

*Chairman, Architects' War Committee.*

C. STANLEY PEACH,

*Hon. Sec., Architects' War Committee.*

[REPLY.]

*Whitehall, S.W. : 14th September 1914.*

*C. Stanley Peach, Esq.,*

*Hon. Secretary, Architects' War Committee—*

DEAR SIR,—I have to thank you on behalf of the Government for your letter of the 11th September and for the generous and patriotic offer of help made by the Architects' War Committee. I am forwarding your letter to other Government Departments, and if any opportunity of utilising your help arises a further communication will be sent to you.

Yours faithfully,

JOSEPH A. PEASE.



Mr. C. Stanley Peach, Hon. Secretary of the Architects' War Committee, has issued the following circular:—

Although it may be presumed that most of the architects who have had to leave their work in order to join the Armed Forces were able, before their departure, to place their work in the hands of colleagues and friends, yet it is thought probable that cases may arise in which it will be difficult for architects to find suitable substitutes. In such cases architects are invited to note that the Architects' War Committee, already formed, is willing to give advice and help. The extent and nature of the help offered may be classified as follows:—(a) Undertaking complete charge of an office; (b) Carrying on in all its phases a specific piece of work; (c) Visiting a specific piece of work and reporting to office only; (d) Dealing with clients, builders, and general matters; (e) Providing draughtsmanship directly or indirectly; (f) Giving only general advice on and when required.

Readers in sympathy with the Committee's efforts can help in one or more of the following ways:—

1. By writing to the Hon. Secretary, Architects' War Committee, 9 Conduit Street, Hanover Square, London, offering their services, when a form will be sent to them inviting specific information as to the extent and nature of their generosity, should this be called upon.

2. By sending this announcement to colleagues who have already joined the Forces, and who are known or supposed to require assistance.

3. By intimating their own intention of joining the Forces, and the general nature of the professional circumstances which will result, when another form will be sent with full details.

4. By drawing the attention of others likely to be interested in this movement, whether prospective donors of services or military patriots.

The War Committee desire to emphasise that their offer of help is extended to all architects, whether or no they be members of any organised architectural body.

The Committee also wish to call the attention of those desiring of joining the Army to the fact that certain advantages may be obtained by recruits by joining through the Architectural Association rather than through other channels.

#### **The War and the Proposed New Charter.**

*Corn Exchange Chambers, Wharf Street, Sheffield :*  
6th August 1914.

*The Secretary R.I.B.A.—*

DEAR SIR,—May I ask what effect the present international crisis will have on the proceedings of the Institute with regard to the New Charter.

As you know, my colleague, Mr. Wrench, and I represent many hundred Licentiates who wish to protest against the Charter being granted in its present form, and in justice to them we should like to know the intentions of our governing body.

As an ex-Volunteer it is probable that I may be called upon for service, and I understand that Mr. Wrench may be affected in the same manner.

Is it possible, therefore, for your Council to give an undertaking that the matter shall be so adjusted that time be guaranteed after the war for our appeal against the Charter?

May I also ask that your reply to this letter be framed in such a way that it may be published in the London papers and the architectural journals? It is very desirable that those who are supporting us should know the reason for the suspension of action, and the publication of this letter, and your reply thereto, will save a great amount of correspondence.—Yours faithfully,

FRANCIS A. WINDER.

In the absence of the Secretary the matter was referred to the President, who replied:—

10th August 1914.

*Francis Winder, Esq.—*

DEAR SIR,—In reply to your letter of the 6th inst., you may take it for granted that the Council of the Institute will not be occupied with the consideration of the New Charter, or take any steps in connection with it, at the present time.—Yours faithfully,

ERNEST NEWTON.

*President R.I.B.A.*

#### **Architects' Special War Relief Fund.**

The following appeal has been issued:—

The Royal Institute of British Architects, feeling it to be their duty in this national emergency to arrange for such collective action by the architectural profession as may be found to be desirable, have, with the co-operation of members of other architectural bodies, formed an Architects' War Committee which is broadly representative of the whole profession in the United Kingdom.

It is felt that a contribution by the whole body of architects to the Prince of Wales's Relief Fund will not only secure a larger donation and enable all to help, however small a sum they are able to subscribe, but that the donation given in this way may encourage others to a like effort.

The Committee will be glad to receive contributions to this Fund.

While, however, it is most important that the National Fund should be supported, the Committee cannot be blind to the fact that there is likely to be a great deal of temporary distress among architects.

The Board of Trade Returns for the month of August show the immense diminution of trade already caused by the War, which cannot fail to have a serious effect on the work of our profession. The funds at the disposal of the Architects' Benevolent Society are quite inadequate to cope with such an emergency. The War Committee therefore hope that all architects who are in a position to do so will give the most generous support to the "Special Fund"

intended mainly for the assistance of architects and for other matters arising from the War which may affect our profession.

Donations should be sent to the Hon. Secretary, The Architects' War Committee, 9 Conduit Street, Regent Street, W.

#### The Architectural Association: War Service.

The Architectural Association have issued the following circular:—

18 Tufton Street, Westminster: 12th September 1914

SIR,—For the convenience of all members of the architectural and kindred professions and their friends who wish to respond at once to Lord Kitchener's appeal, the following arrangements with the various authorities have been made:—

#### LORD KITCHENER'S ARMY.

All men enlisting at Whitehall in any branch of His Majesty's Regular Forces, through the Architectural Association, will be sent to whichever regiment they may choose, provided it is not recruited to its full strength, and they will be kept together as far as their duties will allow.

Our President and a number of members have already been accepted for the Royal Engineers, where as Sappers they will find their civil training gives them a great advantage. Those who prefer to join the Cavalry, Artillery, or Infantry, can do so, and I am arranging with the recruiting station in the City to send applicants to them for enlistment in the units being reserved for City men.

The term of enlistment is for the war, and the age limit is 19 to 35. Pay at the usual army rates.

A special branch of the Motor Transport Corps is now being formed to collect and repair the numerous cars attached to the Allied Forces in the field. A limited number of recruits are required immediately.

Every man applying must be a mechanic skilled in motor repairs, and he should state whether he can bring his own car or motorcycle.

Pay for the lowest rating will be 3s. 3d. a day. As the Corps is expected to leave England shortly recruiting must be rapid, and men wishing to join, who have the necessary qualifications, should communicate with me at once.

Work in the profession is likely to become scarcer as the war continues, and to economise employment is most desirable. All assistants and others eligible for Kitchener's Army should not hesitate to join at once, leaving their berths to those who from age or health cannot be accepted, and who may otherwise be out of work.

In this connection, I understand that the Royal Institute of British Architects is arranging for the work of younger men in practice, who wish to join the forces, to be looked after during their absence.

#### TERRITORIALS.

*Foreign Service.*—The Foreign Service battalion of "The Artists" is at full strength, but a few picked men are being enrolled as a reserve, and they will be trained in the 2nd battalion until vacancies occur.

*Home Defence.*—A second battalion of "The Artists" is being formed for Home Defence and a few vacancies have been reserved for members of the A.A. and R.I.B.A. Members applying to me direct will be furnished with an introduction to the Head Recruiting Officer.

Men of the second battalion will live at home at present.

Term of enlistment, 4 years. Pay 1s. a day, and 2s. a day allowance until barracks are provided.

The Territorial Engineers are not at present recruiting for Home Defence.

#### ARCHITECTURAL ASSOCIATION VOLUNTEER TRAINING CORPS.

The A.A. Volunteer Training Corps, as originally proposed by Mr. Maurice Webb, is now being formed in connection with the Central Volunteer Training Corps Committee, of which

Lord Desborough is Chairman. This Committee has received permission from the War Office to encourage and create Training Centres throughout the Kingdom for men who are ineligible for Lord Kitchener's Army or the Territorials, or who are prevented by special circumstances from joining the Forces.

The A.A. Corps, of which the Rifle Club will form the nucleus, is open to all Architects and Surveyors, and members of kindred professions; the only qualification being that they are prevented from joining the Army as at present constituted.

The Headquarters of the Corps will be the Central Electric Supply Co.'s Station, Lodge Road, St. John's Wood, where there is ample accommodation for miniature rifle practice, revolver practice, drill and skirmishing.

Members can drill any day of the week except Sundays, and obtain musketry practice likewise, except on Tuesdays and Thursdays.

There is an entrance fee of 5s., and a subscription of 2s. a month, but this latter is liable to be increased if the price of ammunition advances.

Rifles and revolvers of service weight are provided for musketry practice at the ranges, with an allowance of 21 rounds of ammunition per day free of charge, and members will be able to purchase further supplies at the range if required.

The general equipment of the Corps will depend on private effort to a great extent, but assistance will also be obtained from the Central Volunteer Training Corps Committee.

It is not proposed to limit membership of the Corps in any way, except as stated above, and I should be glad to receive names of intending members as soon as possible.

All applying should state clearly why they are unable to join the army, and when enrolled they will be furnished with a Special Pass, to admit them at Headquarters.

ALAN POTTER,  
Hon. Sec., A.A. War Service Bureau.

#### The R.I.B.A. Record of Honour: First List.

Intimation has been received that the following Members, Licentiates, and Students R.I.B.A. have been accepted for service with the Regular or Territorial Forces until the conclusion of the War:—

#### FELLOWS.

Cooper, William: Lieut.-Col. Commanding 5th Batt. Duke of Wellington's Regt. (T.F.).  
Corlette, Hubert C.: Major, King Edward's Horse (King's Overseas Dominions Regt.). Special Reserve Cavalry.  
Fletcher, H. Phillips: Major, 1st Co. of London Yeomanry (Duke of Cambridge's).  
Martin, A. C.: University and Public Schools' Brigade.  
Maule, H. P. G.: Honourable Artillery Company.  
Milne, O. P.: 28th Co. of London Terr. (Artists').

#### ASSOCIATES.

Adams, L. K.: Lieut., 7th King's Liverpool Regt. (Terr.)  
Ball, J. Henry: Surrey National Reserve, Woking, late Captain R.G.A. (R.)  
Barnish, Leonard: "C" Co. Liverpool Scottish.  
Bausor, T. P.: 1st (Reserve) Batt. Herefordshire Regt.  
Bennett, Philip D.: Lieut., 5th Batt. R. Warwickshire Regt.  
Bennett, Thorold: 5th Batt. W. Kent Regt. (Queen's Own) (Territorial).  
Benslyn, W. T.: Royal Engineers.  
Beswick, W.: Captain, 5th Royal Welsh Fusiliers.  
Binning, Alan: London Scottish.  
Birnstingl, H.: 9th County of London Batt. (Terr.)  
Blackford, A. G.: The Artists'.  
Brittan, H. W.: Commission in New Army or Territorial Force.  
Broad, Kenneth: Artists' Rifles.  
Bull, J. W.: Artists' Rifles.  
Bunce, H. E.: Royal Engineers.  
Butler, A. S. G.: "B" Battery, H.A.C.  
Carus-Wilson, C. D.: Officer, 1st County of London Yeomanry (Duke of Cambridge's).

Clarke, John M. : Artists' Rifles.  
 Clarke, L. H. : 5th West Yorks Regt.  
 Cockrill, O. H. : Captain (Terr.)  
 Colthurst, W. B. : Somerset Division Lord Kitchener's Army.  
 Cook, J. O., Jnr. : Captain, Territorials.  
 Cooper, A. : Royal Engineers.  
 Cowdell, C. J. M. : University and Public School Corps.  
 Crawford, C. : Terr. Force, Record Office.  
 Curtis, S. Carey : Capt. and Hon. Major, O.C. R. Guernsey Eng. (Militia).  
 Dixon-Spain, J. E. : Lieut., R.F.A. (Special Reserve).  
 Gibson, E. H. : Royal Naval Volunteer Reserve.  
 Gotch, L. M. : Royal Engineers.  
 Grant, F. T. W. : Royal Engineers.  
 Grice, W. S. : The Artists'.  
 Ground, J. K. : Honourable Artillery Company.  
 Guthrie, L. Rome : London Scottish.  
 Hack, M. S. : Q.M.S., Artists' Rifles.  
 Harris, Philip Capes : 3rd City of London R.A.M.C. (Terr.)  
 Hatchard-Smith, W. H. : The Artists'.  
 Hayward, A. B. : 3rd Co. 3rd Batt. "The Buffs."  
 Hett, L. K. : Royal Engineers.  
 Hill, J. : Hon. Artillery Company.  
 Hill, R. H. E. : Honourable Artillery Company.  
 Hitch, J. O. B. : The Artists'.  
 Horsfield, J. Nixon : Royal Naval Volunteer Reserve.  
 Hosking, T. S. : Royal Engineers.  
 Kennedy, E. R. : 2nd Lieut., 8th Batt. Royal Irish Rifles.  
 Kirk, Albert E. : Lieut.-Col., O.C. 7th Batt. W. Yorks Regt.  
 Lawcock, Arnold : Royal Field Artillery.  
 Lowe, A. E. : in a Northumberland Regiment.  
 McDermott, W. Kingsley : Royal West Kent (Terr.)  
 March, J. E. : Civil Service Rifles (Terr.)  
 Martin, J. G. : R.E., No. 2 Billeting Co., Chatham.  
 Matthews, Bernard F. : Officer, 1st Wessex Brigade, R.F.A.  
 Milburn, Stanley W. : Northumberland Hussars (Yeomanry).  
 Milburn, William, Jnr. : 3rd Northumbrian Brigade, R.F.A.  
 Moberly, A. H. : Lieut., 1st Surrey Rifles (Terr.)  
 Moore, H. E. : Lieut., Roy. Monmouthshire R.E., No. 1 Co.  
 Morgan, E. E. : Glamorgan Yeomanry.  
 Murrell, H. F. : Artists' Rifles.  
 Newton, W. G. : The Artists'.  
 Pigott, R. M. : Royal Engineers.  
 Pope, A. : Mounted Infantry.  
 Quirke, W. Dalby : 5th City of London Regt. (London Rifles).  
 Rhind, T. Duncan : Major, 5th Royal Scots (Queen's Edin.).  
 Rose, Charles H. : 9th County of London (Terr. Regt.)  
 Scott-Moncrieff, W. W. : Royal Engineers.  
 Searle, Sydney : Lieutenant, Royal Naval Volunteer Reserve.  
 Sturgeon, R. V. : 2nd City Batt. Manchester Regt.  
 Sutherland-Grame, H. V. : London Scottish.  
 Sutton, B. H. : University and Public Schools Corps.  
 Swindells, F. H. : Royal Engineers.  
 Tanner, E. J. : Artists' Rifles.  
 Tapper, M. J. : The Artists'.  
 Topham, G. R. : Artists' Rifles.  
 Walker, E. Holsworth : Captain, 5th K.O.Y.L.I. (Terr.)  
 Walker, J. W. : Capt., Deeside Batt. Gordon Highlanders.  
 Watson, Bryan : The Artists'.  
 Wheeler, Christopher W. F. : Sussex Yeomanry.  
 Wilson, Allen W. : Lord Kitchener's Army.  
 Wilson, H. J. : 6th Batt. Northants Regt.  
 Wyllie, W. Barnet : O.C. No. 5 Co. Forth R.G.A. (Terr.)  
 Yetts, L. M. : Commission in New Army or Territorial Force.

## LICENTIATES.

Botting, Milton : Royal Engineers.  
 Brown, John : Capt., 4th Batt. Northants Regiment.  
 Craigie, James H. : 7th Batt. Highland Light Inf. (Terr.)  
 Crombie, W. F. : Capt., 5th King's Own Scottish Borderers.  
 Cunliffe, T. H. : Inspector of Buildings (E. Lanes. Div. Area) for use as hospitals, etc., Lieut.-Col. Retired List (Terr.)  
 Fry, P. G. : Capt., 2nd Wessex R.E. (?) (Terr.)  
 Godman, C. R. B. : Capt., Royal Sussex Regt. (Terr.)

Gosling, J. H. C. : Sergt., Cycling Corps, 9th Hants (Terr.)  
 Griffith, G. R. : Terr.  
 Henshaw, Frederick : Lieut., Terr. Force Depot, Andover.  
 Holman-Hunt, H. L. : Burmah P.W.D. Volunteers.  
 Landstein, Arthur : Lancashire Hussars Yeomanry.  
 Lovegrove, Gilbert Henry : Honourable Artillery Company.  
 Mackinnon, W. :  
 MacNaughton, A. G. : Lieut., 9th (Glasgow Highlanders) Batt. Highland Light Inf. (Terr.)  
 Newton, F. G. : The Artists'.  
 Nicholson, A. T. : 4th Border Regt.  
 Smith, C. Bouton : King Edward's Horse (Terr.)  
 Tate, J. Duncan : Lieut., 22nd Batt. County of London Regt.  
 Winder, F. A. : Roy. Garrison Artillery.  
 Wingate, Alex. : Lt.-Corpl., 9th (Glasgow Highlanders) Batt. Highland Light Inf. (Terr.)

## STUDENTS.

Addey, F. A. : Royal Engineers.  
 Aldous, C. F. : Hon. Artillery Company.  
 Archer, H. D. : Hon. Artillery Company.  
 Barrowcliff, A. M. : Lieut., 5th Leicestershire Regt.  
 Bennett, Gwyn : 5th Batt. W. Kent Regt. (Queen's Own) (Terr.)  
 Bonser, K. J. : The Queen's 24th County of London.  
 Cheriton, W. G. L. : The Artists'.  
 Ching, W. T. : King Edward's Horse.  
 Dicksee, H. J. H. :  
 Dowsett, T. W. : Hon. Artillery Company.  
 Jones, L. E. : Commission in New Army or Territorial Force.  
 Lawton, W. V. : Regulars.  
 Lawton, W. V. : Terr.  
 Mountford, E. W. : Terr.  
 Nightingale, F. B. : The Artists'.  
 Odom, J. H. : Derbyshire Yeomanry.  
 Page, James : Lieut. (Terr.)  
 Pidsley, W. G. : Terr.  
 Silcock, A. : Artists' Rifles.  
 Thom-son, J. S. : 14th County of London (London Scottish) (Terr.)  
 Walker, D. H. : Lieut., 5th Batt. A. (Prince of Wales's Own) Yorks. Regt.  
 Whitehead, H. M. : Commission in New Army or Territorial  
 Wilson, J. : The Artists'.

Mr. Maurice Webb (son of Sir Aston Webb), President of the Architectural Association, has joined the Royal Engineers with several other members of the A.A.

## The Ruislip-Northwood Town Planning Scheme.

With the Order made by the Local Government Board approving the Ruislip-Northwood Town Planning Scheme as modified by the Board the final stage in the procedure relating to this scheme has been reached. In accordance with Article XXI. of the Town Planning Procedure Regulations (Preparation of Schemes by Local Authorities), 1914, notification has been made that the Order of the Board giving its approval, together with a copy of the map referred to in the Scheme, may be inspected and any necessary explanation or information in regard thereto may be obtained, without payment of fee, at the office of the Clerk to the Urban District Council of Ruislip-Northwood, Oaklands Gate, Middlesex, on any Saturday between 10 a.m. and 1 p.m., and on any other weekday between 10 a.m. and 5 p.m. during a period of three months from the 7th September 1914. Clause 56 of the Schedule attached to the Order provides that in case of dispute or difference between the Urban District Council and any other person as to the

Council's requirements with regard to the general character or design of the buildings to be erected, the matters shall be referred to an arbitrator to be appointed by the President of the R.I.B.A. The decision of the arbitrator is to be final and conclusive and the reference to arbitration will be deemed a reference under the Arbitration Act 1889.

#### University of London : Department of Town Planning.

The Department of Town Planning at University College, Gower Street, has been established in order to provide a systematic course of training for architects, engineers, and surveyors who are desirous of acquiring expert knowledge in the laying-out of towns. The foundation of a School of Town Planning in London should attract not only students who may be permanently resident in the metropolis and its vicinity, and who may be desirous of availing themselves of the advantages of a university training in this subject, but also students from the Colonies, America and the Continent. The Department is an integral part of the School of Architecture, and students of Architecture and of Town Planning will work alongside one another in the studio. Architectural students who may have obtained a degree or certificate in Architecture are advised to proceed to a course in Town Planning. Professor Adshead [F.], the Principal of the School, will deliver a Public Inaugural Lecture on "The Democratic View of Town Planning" on Thursday, 15th October, at 5.30 p.m., and will give during the Session courses of lectures on (A) Town Planning; (B) Civic Architecture and Landscape Design; (C) Town Furnishing. The Engineering Aspect of Town Planning will be dealt with by Professor Matthews, Municipal Hygiene by Professor Kenwood, and a course of eight public lectures on "The Relation of Plants to Architecture" is to be delivered by Mr. T. G. Hill, beginning on 13th October.

#### L.C.C. Central School of Arts and Crafts.

The Central School of Arts and Crafts, Southampton Row, W.C., which was established by the London County Council to provide instruction in those branches of design and manipulation which bear on the more artistic trades and manufactures, has done much to raise the standard of artistic production. Every opportunity is given to students to specialise in relation to their particular calling by affording fuller opportunities for design and practice in various branches of their craft than can usually be obtained in the ordinary routine of a workshop. In the School of Architecture and Building Crafts individual instruction is given from the point of view that architecture should take its form in response to present requirements and materials grounded on the past experience of building processes, the solution of the given problems being affected by considerations of æsthetic selection. The programme for the session includes a course of lectures on "The Growth

of a House," given on Friday evenings from 8 to 9.30, and a course on English Gothic Art on Wednesday evenings from 8.15 to 9.30. Classes are held at the Victoria & Albert Museum, S. Kensington, on Saturdays, from 11 a.m. to 1.30 p.m., and from 2.20 to 5 p.m. to study architecture, sculpture, decoration, metalwork, furniture, etc.

#### Architectural Courses, Westminster Technical Institute.

The Westminster Technical Institute was established in 1890 by the Baroness Burdett-Coutts, and was presented by her to the London County Council in December, 1900, in order that the Council might continue the educational work then being carried on in the Institute. The Westminster School of Art, established in the Royal Architectural Museum, was transferred to the Technical Institute in 1903, and now forms an integral part of it. Classes in life drawing and modelling are a special feature of the work. A new building, containing well-equipped studios, lecture and class rooms, drawing offices and workshops, was opened in 1908, and provides greatly improved accommodation for the various classes.

Architectural group courses of instruction have been arranged to enable students engaged in the offices of architects, surveyors, etc., to follow out a systematic course of study extending over several years, and involving attendance for three evenings a week. The courses may be varied, with the approval of the Principal, to meet the requirements of individual students. Home work is set each week, and visits are arranged to buildings under erection, and to museums or buildings of historical interest, with the view of encouraging studies and the making of measured drawings of the latter. Every facility is afforded students to prepare Testimonies of Study for the R.I.B.A. Examinations.

The lecturers and teachers for Architectural Design, History of Architecture and Building Construction, comprise Mr. W. T. Benslyn [A.], Mr. Matthew J. Dawson [A.], Mr. W. J. Wilsdon [*Licentiate*], and Mr. F. C. Webster [A.].

Full particulars may be obtained from the Principal, Mr. J. Stuart Ker, Vincent Square, S.W.

#### The Public Library, Kingston-upon-Thames.

Mr. ALFRED COX [F.] writes:—"In the obituary notice of Mr. Dare Clapham, in the August number of the JOURNAL, it is mentioned that he carried out the Public Library at Kingston-upon-Thames in conjunction with me. This is not correct, as although he helped me with the execution of the competition and general drawings he had nothing whatever to do with the designing, detailing, or carrying out of the work. This was entirely my own personal work."

*Erratum.*—The Hon. Secretary of the A.A. serving on the Architects' War Committee is Mr. H. M. Fletcher, not H. P. Fletcher, as given in the last issue, p. 648.

